

Public Works *Digest*

In this issue:

Facilities Engineering





U.S. Army Installation Management Agency

2511 Jefferson Davis Highway
Arlington, Virginia 22202-3926

Public Works Digest is an unofficial publication of the U.S. Army Installation Management Agency, under AR 360-1, The Army Public Affairs Program. Method of reproduction: photo-offset; press run: 1,500; estimated readership: 40,000. Editorial views and opinions expressed are not necessarily those of the Department of the Army.

Address mail to:

U.S. Army Installation Management Agency
2511 Jefferson Davis Highway
Arlington, VA 22202-3926
Attn: Editor, *Public Works Digest*
Telephone: (703) 428-7465 DSN 328
FAX: (703) 428-7384
e-mail: alex.k.stakhiv@usace.army.mil

Donald G. LaRocque
Public Works Program Manager,
Installation Management Agency

Alexandra K. Stakhiv
Managing Editor
U.S. Army Corps of Engineers

Layout:
Armen Kanayan
Corporate Visions, Inc.
Washington, DC

On the cover:
Remodeling jobs range from sprucing up a kitchen to total gutting, like this barracks at Fort Bragg.

3 Letter from the Editor

Installation Management

- 4-5 Southwest Region Planning Charrette Program—partnerships that really work *by Lee Conley*
- 6-7 A quick look—The Army Installation Design Standards (IDS) *by Larry Black, Gary W. Burns, and Lawrence Baxter*
- 8-9 Army develops Family Housing standards *by Jonathan Winkler*
- 9 Access Board to publish ADA and ABA Accessibility Guidelines
- 9 New Army Standard for Company Operation Facilities *by John Scharl*
- 10 Facilities Policy Division regulation update *by Philip R. Columbus*
- 10-11 Technology Standards Group update *by Philip R. Columbus*
- 11 Accessibility standards for disabled individuals *by Larry H. Black*
- 12 NETCALL #29: IMA to civilianize all DPW positions
- 12 Bulletin guides solid waste estimates for renovation *by Stephen Casper*
- 13-14 IAT is the "reach-back" hub for USACE *by Carl L. Burgamy, Jr.*
- 14-15 SPiRiT Validation Team reports its findings *by John A. Scharl*
- 16 USACE supports Army's Force Protection efforts on installations *by John Grigg and Wade Doss*
- 17 Installation Status Report (ISR)- 2005 Infrastructure update *by Linda Smith*
- 17 New Army standard/standard design for consolidated Fire/Police/Safety facilities
- 18-19 "Recycling" Army recycling policies *by William F. Eng*
- 19 IMA announces Fire & Emergency Services Award winners

Installation Successes

- 20-21 Fort Stewart sets the modularity standard *by Anna Chafin*
- 22-23 Installations make most of early receipt of SRM funds
- 24 Historic post buildings get facelift *by Spc. Susan Redwine*
- 24-25 Iowa Army Ammunition Plant initiates recycling program for fly ash
- 25 Fort Lee gets a new Regional JOC *by Bradford W. Hill*
- 26 Fort Lewis sports new deployment facility *by Andrea Takash*

New Technology

- 27 New device monitors metal content in stack emissions at Tooele *by Dana Finney*
- 28-29 Fort Hood upgrades paint spray booth with mobile zone system *by Dana Finney*
- 29 Wide-area assessment of UXO sites using an airborne multi-sensor approach *by Jerry L. Hodgson*
- 30 Byproduct of novel waste treatment system promotes plant growth *by Ryan Busby and Dick Gebhart*
- 31 New options for managing solvent-contaminated wipes on horizon *by Beverly VanCleaf*
- 32-33 Heat – a valuable alternative to chemical wood treatment *by A. Lynn Hoch*

Automation

- 34-35 The Army Installation Design Standards (IDS) web portal: an informative and collaborative web tool available to all *by Larry H. Black, Gary W. Burns, Josh Park, and Mason S. Chang*
- 35 HOST offers lead hazard management information and instructional programs for garrison managers *by Graham Parker*
- 36 HQRADDS is changing! *by David Purcell*
- 37 OACSIM's Enterprise Architecture to evaluate information technology investments *by Alladore Csontos*

Energy

- 38 New utility policies for RCI *by William F. Eng*
- 38-39 Installations looking at energy security *by Jim Paton*
- 39 Have we learned enough to get it right? *by Derya Smith*
- 40 249th Engineer Battalion Soldiers and IMA provide emergency backup power to Hawaii wastewater treatment plant *by SFC Christopher P. Woolley, and Major Paul B. Olsen*

Professional Development & Training

- 41 Get ready for the 2004 Combined Services Recycling Workshop in Phoenix, Arizona *by William F. Eng*
- 41 Meet me in St. Louis
- 42 Energy awareness seminars provide opportunity to conserve energy, save money *by David Williams*
- 42 Economic Analysis Workshops

Who's Who at IMA

- 43 William (Bill) Sugg - Public Works Division, Installation Management Agency



LETTER FROM THE EDITOR



Over the last 15 years, many of you have grown accustomed to having the *Public Works Digest* delivered to your homes or offices. Starting with this issue, we will no longer be mailing the *Digest* to everyone on our distribution list. With our ever-shrinking and ever-tightening budget, we can no longer afford to do that. Therefore, we are cutting the number of hard copies printed in half from 3,000 to 1,500. Those will be mailed to our original target audience, the installation DPWs, as well as to the Assistant Secretary of the Army (Installations & Environment), Installation Management Agency (IMA) Regions, MACOM Engineer offices, and IMA, ACSIM and HQUSACE headquarters. Those of you who do not fall into any of these groups can still access the latest *Digest* and archival copies from the IMA homepage at: <http://www.ima.army.mil/news.asp>.

This is the second year that the July/August *Digest* is dedicated to facilities engineering issues. It is jam-packed with important information about the new units of action, new guidelines, new standards, new technology and new ideas for construction.

Highlights of the Installation Management section include an article on the Southwest Region Planning Charrette Program-- the first major initiative by USACE to create virtual project delivery teams to address all aspects of a planned project. Other articles take a closer look at the new standards developed by ACSIM for Family Housing, Army Design, Accessibility for Disabled Individuals, Fire/Police/Safety facilities and Company Operation facilities. USACE's force protection efforts on installations and how its Infrastructure Assessment Team provides reach-back support are also covered in depth, while NETCALL #29 outlines IMA's plan to civilianize all DPW positions.

More and more installations are submitting articles about their successes in all areas. In this issue, Fort Stewart shares how it is setting the modularity standard for other installations in supporting its reorganization of the 3rd Infantry Division from brigades to units of action. The early receipt of SRM funding from IMA prompted installations from IMA's Southeast Region and Southwest Region to write brief vignettes about how they spent that money. We have also reproduced LTG James B. Peake's letter of appreciation for IMA's funding support of barracks renovations on Fort Sam Houston. In addition, read about how the Iowa Army Ammunition Plant has initiated an off-site recycling program for fly ash (coal combustion residue) at no cost to extend the life of their landfill, and how Fort Lee has acquired a new regional job order contract, which consolidates procurement resources and shares the unit price book, personnel and subcontractors with Forts Story, Eustis and Monroe.

In conjunction with the standards articles, it's important to read about the Army IDS web portal in the Automation section. Also, please note that HQRADDS is changing, and that the OACSIM's Enterprise Architecture will be evaluating information technology investments. A few of the issues covered in the Energy section include new RCI utility policies and how installations can develop and implement energy security plans.

Most of the articles in the New Technology section were originally submitted for the environmental issue (May/June) but were pulled due to lack of space. Topics include a device for monitoring metal content, upgrading paint spray booths, a new waste reduction system, using airborne remote sensing, managing solvent-contaminated wipes, and controlling pests in wood products with heat.

The Training and Professional Development section provides vital information on the DPW Worldwide Training Workshop, Economic Analysis Workshops, Combined Services Recycling Workshop and energy awareness seminars. The Who's Who at IMA section introduces William (Bill) Sugg, the jack-of-all-trades in the Public Works Division.

The next issue of the *Public Works Digest* will cover energy management and water conservation on our Army installations. The call for articles will end on 27 August 2004. We look forward to hearing from you about the many innovative things you are doing to stay in tune with the demands for energy resource preservation.

Alexandra K. Stakhiv
Alexandra K. Stakhiv, Editor, *Public Works Digest* PWD



Southwest Region Planning Charrette Program—partnerships that really work

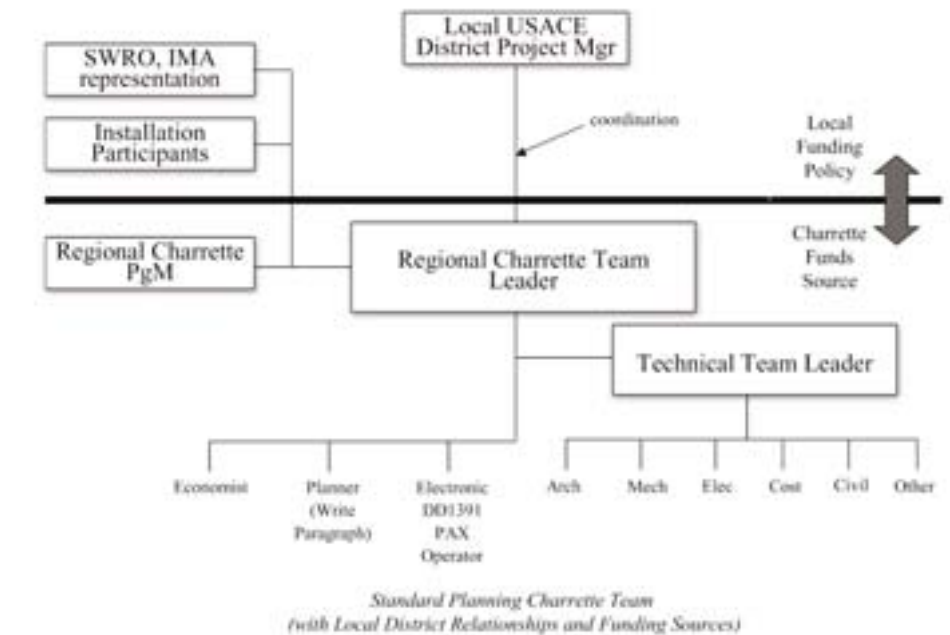
by Lee Conley

Over the course of the last few years, infrastructure planners have relied more and more heavily on charrettes as they attempt to anticipate the Army's needs. In the era of transformation and modularity, accelerating the planning process is vital. The very nature of our DD Form 1391 planning charrettes is fast-paced, demanding and inclusive, touching on all aspects of the planning process. The U.S. Army Corps of Engineers (USACE) has enhanced the process by developing a region planning charrette program to address all aspects of a planned project quickly and efficiently.

"Charrette," a French word meaning "cart," originated in the 19th century beaux-arts system of French architectural instruction. The term grew to describe student last minute efforts to meet the deadline as a small wooden cart was pulled through the instruction hall to collect their drawings. Today, the spirit and culture of the charrette is essentially the same: people sharing their creativity and expertise to form solutions to problems.

At the core of the Army planning charrette process is the tailored, inter-disciplinary design team. Each member of the team, comprised of installation-, Corps-, and command-level persons, brings unique abilities to bear during the charrette process. Through the sharing of talents, the charrette takes shape. Thus, the planning charrette serves as a rallying point for everyone who has an interest in the project, bringing focus to team members and Army leadership expectations.

The main objective of planning charrettes is a complete and accurate DD Form 1391 that describes a functional facility with the least impact to the environment and the greatest benefit to the Army. The planning charrette is different from a design charrette, which may occur several months or years later during the design phase of a project's life cycle. Planning charrettes encompass all areas of master



planning, environment, fire, safety, and force protection, seeking to reduce the likelihood of error and ambiguity for the design team.

In anticipation of the changing Army environment, the USACE Divisions supporting the Southwest Region Office (SWRO), Installation Management Agency (IMA); the South Pacific Division and the Southwestern Division, are approaching planning charrette execution in a combined fashion by regionalizing and consolidating project lists, resources, and cost estimates. This regionalized approach to planning charrette execution in the Southwest Region creates a process that is fully collaborative, applying a uniform approach to deliver a consistent product to the Army. The intent is to gain efficiencies, streamline the process and create a consistent, high-quality DD Form 1391 by using cross-functional teams to build on strengths and capitalize on available resources.

The annual planning charrette program is inherently time critical, involving intensive prior planning. The USACE

southwest region's process responds by aggressively tackling problem definition, problem solving and the management of information in general. The regional planning charrette program goals and expectations are:

- Exeditiously execute the southwest region's annual charrette program and DD Form 1391 validation as outlined in the Army's Future Years Defense Plan. These services are provided at the request of the installation, SWRO or HQ IMA.
- Deliver thorough regionally consistent, well thought out, technically accurate, and articulate DD Form 1391s, with all tabs and signatures, to the Southwest Region and the installations.
- Provide high-quality, defensible results in a timely and cost-effective manner.
- Ensure charrette product consistency and quality throughout the Region for both USACE and Architect/Engineer (A/E) deliverables.





(continued from previous page)

- Establish and sustain a charrette training program that provides newcomers an orientation to the charrette process, mindset and culture.

The Southwest Region Planning Charrette Program Management Plan (PgMP) provides the framework for program execution. Policies, best management practices, funding flow, current year execution schedule, integrating and incorporating lessons learned are outlined in the PgMP.

In the Southwest Region Charrette Program, a single program manager (PgM) oversees all aspects of planning charrette execution. Regional charrette teams fall

project requirements; it is not uncommon for some of the disciplines and team duties to be combined.

Typically, the team leader coordinates and finalizes all charrette team members, installation staff/IMA region participants and charrette/DD Form 1391 requirements in advance of an on-site meeting. Team members respond to the regional charrette team leader. In addition, the team leader coordinates with local district project managers.

The final planning charrette product is finished by the team 30 to 45 days following the on-site meeting. The entire planning charrette process takes from 7 to 13 weeks depending on variables such as project complexity, site location, and resource availability.

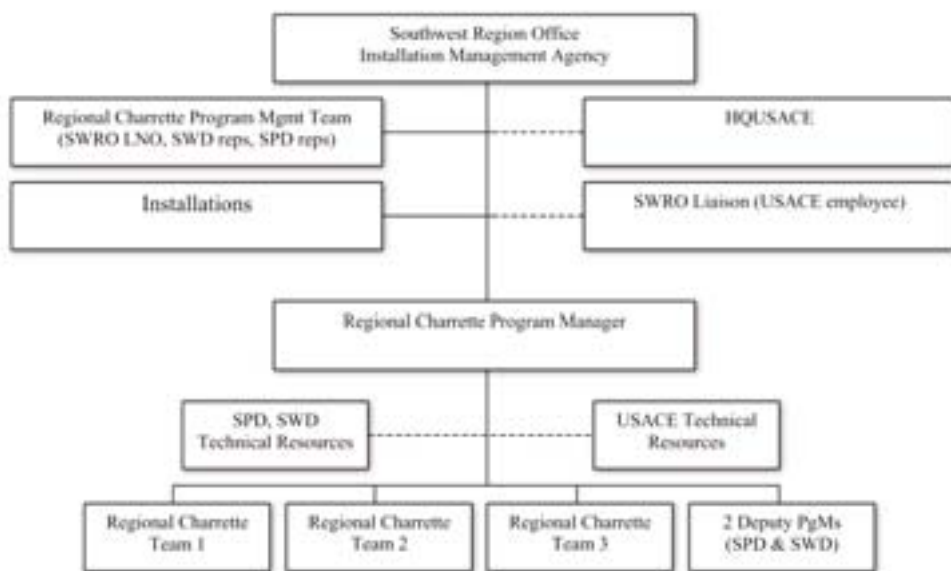
4. Site plan depicting all primary facilities.
5. Sustainable Design (SPiRiT) checklist showing the sustainable design alternatives considered and the anticipated SPiRiT score.

A vital aspect to instilling and perpetuating the "charrette culture" is training. Currently, this purpose is being served primarily by on-the-job training; however, the Region Charrette Program Management Team is in the process of creating a more formalized training program. The proposed curriculum would cover the DD Form 1391 process, cost estimating rationale, rules of thumb for charrette project planning and execution, and components of the charrette product. Our goal is to create, in effect, a formalized certification process to highlight, recognize and qualify charrette team members and charrette team leaders.

The Southwest Region Planning Charrette Program is the culmination of efforts by all stakeholders and represents the USACE's first major initiative to create virtual project delivery teams with respect to charrette program execution. The planning charrette serves to illustrate USACE's commitment to thoroughness, completeness, and responsiveness when developing a full DD Form 1391 on behalf of an Army installation.

POCs are Ana Ortega, Southwest Region Planning Charrette Program Manager, USACE; Frank Chui, South Pacific Division, USACE; and Randy Holman, USACE Liaison to the Southwest Region Office, IMA.

Lee Conley works in the Southwestern Division, USACE, (214) 767-3498. PWD



Southwest Region Planning Charrette Program Organization Structure

under the authority of the PgM and are formed to execute individual project planning charrettes. The PgM receives guidance from and is supported by a host of entities: SWRO, installations, a regional charrette program team, technical resources and HQUSACE. The regional charrette teams are assembled from resources throughout the South Pacific Division and the Southwestern Division USACE, as well as throughout USACE in general. Team members from 5 to 10 disciplines are task-organized according to the

Ultimately, the Southwest Region's planning charrette deliverable has the following basic elements:

1. Complete DD Form 1391 (in accordance with the most recent Engineering Construction Bulletin (ECB) 2003-8, this includes all tabs and signatures as well as a charrette validation form).
2. Technical write-up of the designer's intent.
3. Standard floor plan (or a schematic floor plan when a standard floor plan is not available, rendering as requested).



A quick look—The Army Installation Design Standards (IDS)

by Larry Black, Gary W. Burns, and Lawrence Baxter

Why Army Installation Design Standards?

The U.S. Army is the world's most professional military force capable of deploying at a moments notice ... with overwhelming force, enhanced deterrence, and sustainable presence. The Army maintains its worldwide military dominance through highly-trained, professional Soldiers, modernization of equipment, combat capability, and quality installations. Installation excellence - reflected in well planned, designed, constructed, and maintained infrastructure - ensures we can care for Soldiers and their families, provide quality training, maintain our mission essential equipment, and assists in enabling us to project power anywhere in the world on short notice.

The Army Installation Design Standards, or IDS, were developed to provide standardization of the various architectural, engineering, and landscape elements inherent across all Army installations. The IDS defines the mandatory standards for our facilities and provides requirements for cost-effective resource investment such as Sustainable Design criteria. The IDS provides the Army program of total installation planning to specific requirements that instills a sense of community, order, tradition and pride across all of our posts, camps, and stations.

The IDS provide a common set of facility standards to provide for the effective and proper use of our land and infrastructure. They help build installations all can be proud of and support good stewardship of our resources.

Excellence in installation development and management depends upon the best management practices, common standards, and consistent criteria with active participation from all stakeholders.

The IDS homepage at http://www.mantech-mec.com/army_ids/ provides a web portal with access to the

interactive IDS and, in addition, provides a place to download the IDS in either an MS Word ® or PDF format.

The IDS contains two parts. Part 1 is the Army Standards while Part 2 is a model for the development of the installation specific Installation Design Guide (IDG) by which the standards established in Part 1 are implemented Army-wide on an installation by installation and facility by facility basis.

Part 1 Army Standards includes a Table of Contents, an Executive Summary, and seven chapters, in which are established the standards for the various aspects of installation and facility design. At the end of Part 1 is an index specific to Part 1. There is a separate index for each part of the IDS. This gives the users of the Model IDG the opportunity to have a ready built index for use with the model. The MS Word ® search tool can also be used to find topics directly from the IDS text.

Chapter 1: Introduction

Chapter 1 defines the Purpose, Authority and Applicability of the standards, which are defined in the six chapters that follow. Responsibility is also delineated beginning with the Garrison Commander and ending with the final approving authority, the Army Facilities Standardization Committee (AFSC). A procedure is given for submitting a Request for Waiver (of a standard for a particular installation's IDG) or Change (of some part of a standard in the IDS).

Chapter 2: Site Planning Standards

Chapter 2, Site Planning Standards, defines the process of arranging an external physical environment in complete detail to form the built environment. Addressed are such design components as Accessibility, Environmental, Natural Conditions including topography and climate, and Manmade Conditions. Listed at the end of the chapter, as is listed at the end of all chapters in Part 1, are those documents

which are incorporated into the IDS under the heading "Army Standards" as well as additional listings under the heading "References" which provide additional guidance specific to the relative chapter.

Chapter 3: Building Design Standards

Chapter 3, Building Design, provides the Army standards for facility planning, design, construction, operation, maintenance, sustainment, repair, and modernization. The standards apply to all facilities for physical security, design, structural character, accessibility, seismic, interior design, furnishings, sustainability, historic preservation, mechanical, electrical, and communication systems. The standards for building entrances, plazas, courtyards, service areas, and lighting are established. Eight pages are devoted to Interior Design Standards. Chapter 3 provides all of the Army Facilities Standardization Committee (AFSC) approved standards for facility types by real property category code. Only the AFSC has authority to approve the standards, make changes, and authorize waivers.

Chapter 4: Circulation Design Standards

Chapter 4, Circulation Design, provides the Army standards for both vehicular and pedestrian traffic. Vehicular circulation includes standards for a roadway hierarchy, setbacks for buildings, intersections, parking, and integration with the other elements of the environment including landscaping, service areas and drop-off area. Standards are defined for Walkways, Running Trails, and Bikeways. The chapter ends with 12 references listed under Army Standards and 5 under References.

Chapter 5: Landscaping Design Standards

Chapter 5, Landscaping Design Standards, include the selection, placement, and maintenance of plant material to improve the physical and psychological well being of the people on the installation. Standards are established for tree protection and





(continued from previous page)

preservation. Force Protection considerations are given as they relate to landscaping. The Standards and References at the end of the chapter list 5 standards and 3 references.

Chapter 6: Site Elements Design Standards

Chapter 6, Site Elements Design Standards, include site furnishings, exterior signage, exterior lighting and utilities. Site Furnishings include seating, miscellaneous structures such as bus and picnic shelters, walls and fences, and trash receptacles. The Standards for Exterior Signage and Lighting give detailed criteria including charts for light levels as well as lamp type and usage. The chapter concludes with 17 listings under Standards and References.

Chapter 7: Force Protection Design Standards

Chapter 7, Force Protection Design, provides the standards in a comprehensive fashion, the subject having been selectively discussed in the five preceding chapters. The standard for certain site elements such as fencing, lighting and landscaping are looked at solely for the purpose of Force Protection. Eleven documents are listed in Standards and References.

About Part 2 Army Installation Design Guide Model

Chapter 8: Installation Design Guide (IDG) Model

Part 2 of the IDS consists solely of the IDG Model, which is set out in its entirety as Chapter 8. The model IDG contains 12 sections as discussed below. Sections 2 through 6 are particular to the development of an installation specific IDG.

• **Section 1**, "Introduction" provides the IDG purpose, goal, objectives, audience, organization, when to use, maintaining,

responsibilities, and sustainable design development.

• **Section 2**, "The Installation Design Guide Process and Implementation," states, "the IDG provides direction for achieving a sense of community, order, tradition, and pride on our installations." The Design Guide Process is then described in terms of setting goals, conducting visual surveys, establishing visual zones and themes, assessing assets and liabilities, making recommendations with



cost estimates for improvement projects, prioritizing funding, and creating an implementation plan. The "design standards" to be covered in Sections 7 through 12 are then listed followed by "Using the Design Guide" and "Implementation." Supporting checklists are in the appendix for: Design Team IDG; Project Requirements; Interior Design review.

• **Section 3**, "Design Guide Analysis Criteria" addresses Design Principles and Visual Elements, for the installation. Both of these will be further expanded on in the sections on Site Planning and Building Design.
• **Section 4**, "Installation Profile," describes the process by which the "setting" may

be defined as well as determining existing and proposed land uses.

• **Section 5**, "Visual Themes and Zones" describes the process by which an installation should be subdivided into defined "zones" segregated by use or activities. In such areas, "visual themes" will be established so as to create a "sense of place." The various criteria will result in a "visual zone analysis."

• **Section 6**, "Improvement Projects" consists of projects generated from the recommendations presented in the visual zone analysis accomplished in Section 5. The Garrison Commander chairs the Real Property Planning Board (RPPB) to establish improvement projects to meet the IDS priorities for each visual zone and an installation priority. The IMA Region Directors will approve each installation's IDG and Prioritization of Project lists.

• **Sections 7-12**: The remaining Sections 7 through 12 parallel the Chapters in Part 1, "Site Planning," "Building Design," "Circulation," "Landscape," "Site Elements" and "Force Protection." Within these sections, the installations insert their installation specific information relevant to the topic under discussion.

The Appendices

Following Part 2 is a set of 17 Appendices, which relate selectively to both Parts 1 and 2.

POC is Larry Black, (703) 602-4591, e-mail: larry.black@hqda.army.mil

Larry Black is a Program Manager/Architect in the Facilities Policy Division, OACSIM; Gary W. Burns is the ManTech Corporation, Army Installation Design Standards Program Manager; and Baxter Lawrence is a Senior Staff Specialist for Facilities Planning with ManTech Corporation supporting the Installation Design Standards program. PWD



Army develops Family Housing standards

by Jonathan Winkler

Army Chief of Staff General Peter Schoomaker announced that "Installations as Flagships" would be one of the Army's 16 immediate focus areas. This past February, Geoffrey Prosch, the Acting Assistant Secretary of the Army for Installations and Environment said, "We have pledged to rid the Army of Camp Swampy -- substandard installations." To do this, it is crucial that the Army can identify what 'the standard' is, so that we can readily identify what work a facility or installation needs to make it no longer 'substandard.'

The Office of the Assistant Chief of Staff for Installation Management (ACSIM) this year completed the transition towards improved installation business practices, cutting out layers of bureaucracy to manage its \$15 billion budget through one organization, the Installation Management Agency (IMA). The changes are not merely enhancements or band-aid fixes, but represent new and fresh approaches to make installations more efficient and effective worldwide as we improve facilities where Soldiers work and live.

Installation Design Standards (IDS) have been developed that provide Army level minimum required standards. This gives installations the framework for building or renovating Army Family Housing (AFH) to standard (as well as all other aspects of installations). Installations need to account for local conditions and requirements as they update their Installation Design Guide (IDG) based on the standards outlined in the IDS. The goal is to achieve a more consistent quality of life for Soldiers and their families across the Army installations. It is not a goal to make all Army Family Housing look exactly the same.

With the IMA focused on installation facilities, commanders can focus on training and war fighting. The bottom line is that Soldiers, and their families, should live in housing conditions comparable to those they have pledged to defend.

Until recently, the size standard for family housing was based on an allowable maximum number of net square feet (NSF). This was the LAW (title 10, sec 2826). The budgetary process and procedures led to consistent shortfalls in project and sustainment funding (because maintenance funds are often regarded as discretionary accounts). These same accounts have also had to operate with large fluctuations in annual funding of overall operations accounts (do more with less), which during lean periods leads to piecemeal and inefficient band-aid repairs. For family housing, the late 1980s saw a focus on whole house renovations, and in 1992, the Army fully adopted the Whole Neighborhood Revitalization (WNR) program with the publication of TN 210-50-01, the "AFH Planning Guide."

Major General Larry Lust, the ACSIM, said in 2003, "I believe that there should be certain Army Standards that define what each facility type must include..." that we are not building facilities only to meet the preferences of today's

local commanders, and "we must build Army facilities as our legacy to the commanders and Soldiers of the future. This is why Army Standards for facilities are so important."

Looking to the future, size limitations are now replaced with program benchmarks, measured in gross square feet (and meters) instead of net. As an example, a construction requirement for a staff sergeant with three children now equates to a project construction budget of 1950 GSF x \$ 71/GSF (which is an average for the USA that is also adjusted up or down depending on the year and construction costs at that location) = \$138,000 to build the unit.

Benchmarks are not intended to require construction to exactly same-sized finished units. Project team members are encouraged to weigh available local options, methods and materials, and make decisions that allow projects to meet or exceed minimum required standards while providing the best end product possible within program authorization.

The Army standard for family housing construction is found in the Unified Facility Criteria (UFC) 4-711-01A, Family Housing, (commonly known as the TI-801-02). It provides the detailed criteria to support acquisition of Army Family Housing ➤

MILITARY CONSTRUCTION Size Standards by Grade in Gross Square Feet					
Equivalent Rank in Private Sector	Bedroom Count	Renovation Minimum Adequacy	Construction and Replacement Minimum	Construction Programming Benchmark	Construction Maximum ¹⁾
E1-E3 (JENL) E4-E6 (JNCO)	2	1,080	1,180	1,340	1,500
	3	1,370	1,490	1,630	1,760
	4	1,530	1,670	1,950	2,220
	5	1,760	1,920	2,300	2,670
E7-E9 (SNCO) W1-W3 (WO) O1-O3 (CGO)	2	1,080	1,180	1,490	1,790
	3	1,520	1,670	1,960	2,050
	4	1,650	1,800	2,150	2,500
	5	1,760	1,920	2,510	3,090
E9 (SNCO) W4-W5 (WO)	3	1,590	1,740	2,020	2,300
	4	1,760	1,920	2,310	2,700
O4-O5 (FGO)	3	1,590	1,740	2,020	2,300
	4	1,760	1,920	2,310	2,700
O6 (GO)	4	1,930	2,110	2,520	2,920
O7-O10 (GO)	4	2,380	2,600	3,330	4,060



Access Board to publish ADA and ABA Accessibility Guidelines

On July 23, 2004, the U.S. Access Board published long-awaited guidelines for facilities covered by the Americans with Disabilities Act (ADA) and the Architectural Barriers Act (ABA). The new guidelines feature updated provisions and various revisions that will improve access in new construction and alterations while facilitating compliance. They replace the Board's ADA Accessibility Guidelines (ADAAG), which were first published in 1991, and earlier guidelines issued under the ABA for federally funded facilities.

The Department of Defense and Army will incorporate the new accessibility guidelines into the Installation Design Standards (IDS).

POC is Larry Black, (703) 602-4591, e-mail: Larry.Black@hqda.army.mil. **PWD**

New Army Standard for Company Operation Facilities

by John Scharl

The new Army Standard for Company Operation Facilities (COF) was approved by the Army's Facilities' Standardization Committee (AFSC) in May 2004. These standards are effective starting with FY 06 MCA projects and must be applied to all construction of new COFs on all Army installations. The AFSC must approve any planned changes from the COF Army standards.

In comparison to previous designs, the new COFs will provide the following improvements:

- (1) Battalion centric design that consolidates COFs for an entire battalion in a single building.
- (2) Modular, flexible design that is easy to reconfigure in response to inevitable changes in force structure, equipment, and doctrine.
- (3) Enlarged areas for storage, training, equipment maintenance, and deployment.
- (4) Locating COFs, where possible, within a consolidated operations and equipment maintenance complex with direct access to the unit motor pool or other corresponding work areas.

The Army Standards will be incorporated into the COF Standard Designs, which should be approved later this summer. The COF Army Standards have been included the Army Installation Design Standards (IDS) and are available on the IDS web-page.

POCs for the COF Facilities Design Team are: Co-chairs for the Facilities Design Team (FDT) for COFs are LTC Peter Nelson, DAMO-RQ, 703-692-7906, peter.nelson@hqda.army.mil; and Suzanne Harrison, DAIM-FDH, 703-601-2498, suzanne.harrison@hqda.army.mil. The FDT POC at the USACE Center of Standardization for COFs is Thomas Brockbank, CESAS-EN, 912-652-5212, thomas.r.brockbank@sas02.usace.army.mil. The OACSIM POC for this action is George Mino, DAIM-FDH, 703-601-2487, george.mino@hqda.army.mil.

John Scharl is the Facility Design Group Coordinator, Facilities Policy Division, OACSIM. **PWD**

(continued from previous page)

using One-Step Turnkey methods. A joint-services UFC is being developed as the requirements document to address criteria common to the DoD services. UFC 4-711-01A will then be revised to supplement the joint-service UFC. Army standards go through an Army Facilities Standards (2-star) Committee (AFSC) before USACE signs off on implementation for the Army.

The Sustainable Project Rating Tool (SPiRiT) is a parallel standard which family housing also must follow. A tri-services family housing group recently consolidated these requirements into an automated form for installation design teams to utilize in completing the required assessments.

The way ahead for Army Family Housing Standards includes enhancing the Army Facilities Standardization process by establishing a means to better evaluate AFH Facilities Standards and recommend updates for AFSC approval. The family housing community gathers annually for a Professional Housing Managers conference, normally in January, which is being considered as a forum for this. Facility standards will focus on project investments such as Construction Standards, Best business practices (prudent landlord approach) and Continued information exchange with industry, RCI and tri-services.

Since October 2003, RCI and AFH have been co-located in Crystal City, Virginia, and the ISR standards have been consolidated into a single booklet for both.

The Army meets with the other DoD services housing standards proponents several times a year, and the joint-services comparable standards are coming very close together. The Army is also working with the other services to publish a joint UFC for family housing.

POCs are Jonathan Winkler, (703) 601- 0716, e-mail: jonathan.winkler@hqda.army.mil; Richard Hentz, (703) 601- 0717, e-mail: richard.hentz@hqda.army.mil; and Ralph Hibler, (703) 601- 0718, e-mail: ralph.hibler@hqda.army.mil

Jonathan Winkler works for the Army Housing Division, OACSIM.



Facilities Policy Division regulation update

by Philip R. Columbus

DPW Regulation Consolidation and Incorporation of Installation Management Agency (IMA) Organization and Operations (O&O) Instructions

In January 2004, the Acting Secretary of the Army directed that all Army documents and directives be updated to reflect the transformation of the Army. The Assistant Chief of Staff for Installation Management (ACSIM) was assigned the task of coordinating the overall Army effort, and he directed a comprehensive review of all our major policy documents. The ACSIM also instructed Office of the Assistant Chief of Staff for Installation Management (OACSIM) regulation proponents to utilize the Rapid Action Revision provisions of AR 25-30, The Army Publishing Program, wherever possible. The changes are to be completed by 30 September 2004.

The ACSIM's primary thrust is to eliminate the reliance on the Organization and Operations documents of the Installation Management Agency (IMA) and pare the regulations down to policy documents.

The directive to perform the Rapid Action Revision of our policy documents occurred while the Facilities Policy Division of OACSIM was in the midst of a

major regulation revision and consolidation project. Our goal with this long-term project is to update all OACSIM regulations and consolidate them into one document. The revised and web-enabled document will be hyper-linked to internal references such as DA pamphlets, non-DPW regulations and external sources on the internet. In this way, references to public law, other agency documents, and private sources would be available to DPW personnel via one source electronic document.

To accomplish our task, we adjusted our plans and priorities. Four regulations within the Division's proponenty were already undergoing complete revision. AR 415-15, Army Military Construction Program Development and Execution, and AR 415-19, Nonappropriated-Funded Construction Project Development and Approval, were being rewritten and consolidated with publication slated for September 2004. AR 210-50, Housing Management, and AR 210-12, Establishment Of Rental Rates For Quarters Furnished Federal Employees, were also being consolidated and revised with a publication

date in late August 2004. As the projected publication dates fell within the ACSIM guidance, we decided to continue these projects.

The goal is to use the Rapid Action Revision process if possible and submit revised regulations to the Army Publishing Directorate by 15 September 2004. OACSIM proponents are conducting reviews of the revised regulations.

Army Regulations currently under review are AR 420-18, Facilities Engineering Materials, Equipment & Relocatable Buildings, AR 420-10, Management of Installation Directorates of Public Works, AR 420-49, Utilities Systems, AR 420-70, Buildings and Structures, AR 420-72, Surface Areas, Bridges, Railroad Tracks and Associated Appurtenances, and AR 420-90, Fire and Emergency Services. Updated regulations which can be modified using Rapid Action Revision will be published following their submission to the Army Publishing Directorate.

POC is Philip R. Columbus, (703) 604-2470, e-mail: Philip.Columbus@hqda.army.mil. PWD

Technology Standards Group update

by Philip R. Columbus

The Technology Standards Group (TSG) supporting the Installation Design Standards is moving forward with several programs. Based upon guidance from the Assistant Secretary of the Army for Installations and Environment (ASA(I&E)), the TSG is initiating a research and development prioritization process, which will supplement the technologies submitted to the TSG. These studies will help determine the Army's applied technology facilities research priorities.

The TSG is working with HQ IMA to assemble a team of installation, region, and headquarters representatives to determine a multi-year technology investment plan for Army facilities. Team members will prepare recommendations for the Army Facilities Standardization Committee (AFSC) regarding what research technolo-

gies should be funded and how they should be implemented. One option is to institutionalize some via the IDS for incorporation over time.

Development of the Installation Design Standards - Technology web pages continues. Our current plans call for a rollout of the TSG pages in the fall of the year, which will enable the TSG to conduct and record technical evaluations online. Technologies and system components currently recommended as good ideas by the TSG include:

Artificial mulch - Should be utilized where pest infestation or drainage issues might preclude natural mulch.

No water/low water urinals - Highly recommended technology for installations to use when economically viable. Current systems provide significant water savings.

Used successfully by government agencies at Fort Huachuca, Fort McPherson, and the Ohio National Guard and commercial sites such as the Rose Bowl, Pro Player Stadium, University of North Carolina, Disneyland, and Phoenix Airport.

Porous pavements - Suggested for use when designers wish to minimize intrusiveness of drainage systems or where standing water in paved areas has been a problem. Designers must be aware of the potential for increased construction cost due to extensive drainage systems required under the paved area. Such systems can be justified to meet operational or aesthetic requirements.

Composite flooring - High foot traffic areas for which carpeting is not permitted but which require a level of attractiveness can benefit from the latest commercial ▶



Accessibility standards for disabled individuals

by Larry H. Black

The Standards

The Army accessibility standards for disabled individuals are web linked from the Installation Design Standards (IDS) home page, for site planning, buildings, and circulation, http://www.mantech-mec.com/army_ids/. The Uniform Federal Accessibility Standards (UFAS) established by public law requires any DoD building or facility to provide accessibility for individuals with disabilities.

A military exclusion is provided by UFAS (4.1.4 [2]), for buildings used only by able-bodied military personnel. In particular, the following facilities need not be designed to be accessible: unaccompanied personnel housing, closed military dining facilities, vehicle and aircraft maintenance facilities. Nevertheless, UFAS requires, when feasible and appropriate, DoD to incorporate accessibility measures into the design since the facility use may change over time.

All other structures or facilities must meet both the UFAS standards and the Americans with Disabilities Act Accessibility Guidelines (ADAAG), with the most stringent standards applied in the event of conflicting guidelines (see AR 420-70, Buildings and Structures, Chapter 2, Para 2.8).

Existing structures will be modified to provide accessibility whenever repairs are made to that part of the facility or renovation/modernization to the whole facility, especially community facilities that are most likely to be used by families, veterans, or visitors.

Site Planning Accessibility Standards

Avoid site barriers through the use of curb cuts, ramps, handrails, and grade-level entrances. Provide designated accessible parking spaces in all non-organizational vehicle parking lots and drop-off zones for persons with mobility impairments. If parking spaces are provided for employees or visitors, or both, then accessible spaces shall



Larry H. Black

be provided in conformance with the required minimum number of accessible spaces shown in the table. Additional spaces should be provided if a parking study verifies requirements. Provisions will be made for preferred parking for carpools or vanpools. See the UFAS, paragraph 4.1.1(5)(a).

Design decisions to meet security and antiterrorism requirements and resolve conflicts will require coordination among the Individuals with Disabilities Committee chaired by the Garrison Commander who has the task to provide accessibility, design disciplines, and appropriate functional areas to include land planners, landscape architects, architects, intelligence

Total spaces in parking area	Required minimum number of accessible spaces
1 to 25	1
26 to 50	2
51 to 75	3
76 to 100	4
101 to 150	5
151 to 200	6
201 to 300	7
301 to 400	8
401 to 500	9
501 to 1000	2% of total
1001 and up	20 plus 1 for each 100 over 1000

personnel, security personnel, Force Protection Officer, facility users, and engineers. The designers must work to balance force protection requirements and still meet the congressional law requirements and Army standards in UFAS and ADAAG.

Accessibility Complaints

Any individual can file an accessibility complaint to the United States Access Board and the Army is required to determine if the complaint is valid. If the complaint is found to be valid, then the installation is required to establish a plan to provide accessibility for approval by Facilities Policy Division, OACSIM, and the Access Board. Installations will then implement the plan to mitigate the complaint following an approved time schedule and report progress monthly to the Facility Policy Division until completed.

Accessibility Resources and Points of Contact

- Installation Design Standards (IDS), http://www.mantech-mec.com/army_ids/.
- United States Access Board POC for the Army is Jeff Sargent (202) 272-0045. Their web site is www.access-board.gov.
- Resolution of facility issues to provide accessibility — Larry Black, AIA, Facilities Policy Division, OACSIM, (703) 602-4591, larry.black@hqda.army.mil
- HQ Installation Management Agency (IMA) support — Bob McKeever, MPRI Operations Division (703) 602-4227 robert.mckeever@hqda.army.mil
- Resolution of employment issues to provide accessibility — Ms. Erni Moya, Director for Individuals with Disabilities, Office of the Assistant Secretary of Army for Manpower and Reserve Affairs, (703) 607-1977. Erni.Moya@hqda.army.mil.

POC is Larry H. Black, (703) 602-4591, e-mail: larry.black@hqda.army.mil PWD

(continued from previous page)

grade composite flooring systems. Life-cycle cost analysis may show that the newest systems can be more cost effective than other traditional flooring and provide a highly-attractive floor covering.

The TSG is awaiting a decision by the Institute of Traffic Engineers on their standards committee regarding LED traffic signals. Once the ITE has concluded their work, the TSG will evaluate the industry standard for adoption in the IDS.

POC is Philip R. Columbus, (703) 604-2470, e-mail: Philip.Columbus@hqda.army.mil.

Philip R. Columbus is a general engineer in the Facilities Policy Division, OACSIM. PWD



NETCALL #29: IMA to civilianize all DPW positions

Below is the text of NETCALL #29 recently sent to garrison commanders by IMA Director MG Anders Aadland...

Military officer billets for Directors of Public Works (DPW) at IMA garrisons have been deleted in the Total Army Analysis (TAA-09) process. The Army no longer supports military DPW authorizations; IMA must civilianize these positions in a timely and efficient manner in order to ensure continued DPW operations.

Based on criteria associated with installation support of a joint, expeditionary Army (e.g. power projection, mobilization support, modularity) and the criteria for the Directorate of Public Works in the Standard Garrison Organization (SGO), standard position descriptions have been developed at the GS-0801-15, 14 and 13 levels. These position descriptions are to be implemented to recruit civilian replacements of departing military DPWs as required to ensure a seamless transition from military to civilian DPWs.

You must recruit and select your civilian DPW before your military incumbent departs in order to provide sufficient overlap to ensure mission success and effective continuity. These recruiting actions, driven by the DA-directed military-to-civilian conversions, are not subject to the IMA hiring freeze announced in NETCALL #27.

We also must ensure DPW positions are aligned to the IMA SGO configuration. For garrisons with mixed functions, such as engineering (DPW) and logistics (DOL) combined under a single directorate, the standard position descriptions (PD) are not applicable; these instances will be worked on a case-by-case basis. Deputy DPW positions are only authorized under exceptional circumstances meeting criteria established in AR 570-4 (para 3-3h); any garrison commander wishing to establish

or retain a deputy DPW position will forward his/her request, with justification, through the region director to IMA HQ for approval.

Unless above exceptions apply, all civilian DPWs will be recruited using the standard PDs for the grade established in the IMA DPW grade matrix. Alternative or locally modified PDs and/or classifications require HQ IMA approval. Donald LaRocque, HQ IMA Director of Public Works, (703) 602-5486, e-mail: Donald.larocque@hqda.army.mil, is the agency's principal subject matter expert in this action; if you have any issues with the DPW civilian grades in the matrix, contact Don. If you have any questions about the standard PDs, contact Agnes Davis at (703) 602-5099/DSN 332-5099 or e-mail: Agnes.Davis@hqda.army.mil. **PWVD**

Bulletin guides solid waste estimates for renovation

by Stephen Cospers

Now available for download on the web is Public Works Technical Bulletin (PWTB) 200-1-24, "Quantifying Waste Generated from Building Remodeling." This bulletin contains guidance to help DPWs estimate the volume of solid waste that will be produced in different types of remodeling projects so that they can plan ahead for recycling or disposal.

The U.S. Environmental Protection Agency (EPA) reports that remodeling projects typically produce more waste than construction projects with the same floor area. This is because renovation usually involves the two steps of removing, and then installing, building components, with both activities producing waste. EPA found that remodeling waste comprises 44 percent of the total construction/demolition (CD) waste stream overall.

Unlike demolition waste, which is easy to quantify by simply weighing, wastes from renovation projects are difficult to estimate. "Renovation" is hard to define

and it's tough to make comparisons because these projects vary dramatically in scope. Remodeling can include everything from interior cosmetic changes to re-roofing to a complete "gut" of the building.

The PWTB presents a process for estimating this waste based on three Army renovation projects that represent typical projects Army-wide. The detailed calculations of waste materials to be produced allow project managers to plan the work with a focus on recycling. For example, if you know that a given project will generate so many tons of scrap steel, you can plan to have a recycling container onsite to receive it at the proper time.

PWTB 200-1-24 can be downloaded from the TECHINFO website at: <http://www.hnd.usace.army.mil/techinfo/C PW/PWTB/pwtb200-1-24.pdf>. For more information about this bulletin or solid waste issues in general, please contact Stephen Cospers at CERL, 217-398-5569, s-cosper@cecer.army.mil.

Stephen Cospers is a researcher in the Environmental Processes Branch at the U.S. Army Engineer Research and Development Center's Construction Engineering Research Laboratory in Champaign, Ill. **PWVD**



Remodeling jobs range from sprucing up a kitchen to total gutting, like this barracks at Fort Bragg.



IAT is the "reach-back" hub for USACE

by Carl L. Burgamy, Jr.

The door to the U.S. Army Corps of Engineers' Infrastructure Assessment Team (IAT) workroom looks much like the hundreds of other doors in the Federal Building in downtown Mobile, Alabama. The only hint that this door might be for something special is the combination safe lock and the sign prohibiting cell phones and other wireless devices.

Inside, the 15- by 15-foot room is filled with a variety of computers, a TV monitor, and a video camera. The walls are covered with acoustical tiles, and in the corner, a computer is attached to a black router box with lights blinking day and night. But it's not the equipment within the room that makes it so special; it's the high-tech links to the world and "reach back" activities going on inside.

The computers are connected to the SIPRNET (classified internet), and the server and router are a 24-hour SIPRNET website for the USACE Infrastructure Assessment Team (IAT). Along with the classified phone, cell phones, blackberries and the video teleconferencing (VTC) equipment, the IAT can communicate classified and unclassified issues, worldwide, utilizing the most sophisticated technologies available to USACE, 24 hours a day.

What is the IAT? The IAT is USACE's coordination element for "reach-back" support under the Field Force Engineering (FFE) concept. Under this concept, the USACE liaison officer(LNO)/planner,

USACE Forward Engineer Support Team, or military unit engineer can "reach back" to the CONUS engineer base for expertise through TeleEngineering, SIPRNET e-mail and other means of communications to conduct real time analysis and solve problems as they are identified.

The IAT operates as an independent team, interfacing directly with the requestor and coordinating with the most appropriate reach back source, USACE lab, USACE center of expertise (CX), mandatory center of expertise (MCX), experts in Corps districts, or pre-established base development teams (BDT) for technical engineering support/assistance. Potentially, all 35,000 USACE employees, experts at other government agencies, academia, and private industry are available for reach back support.

Since March 2003, the IAT has operated 7 days per week and been "on-call" 24 hours per day to provide the required reach-back support to the Central Command Area of Responsibility. This has been mainly in Iraq and Afghanistan.

There are 10 Corps districts with designated BDTs specially trained to provide the required technical responses. These BDTs stretch from Alaska to New England, and they have identified a dedicated, specially trained workforce and obtained similar SIPR communication equipment like the IAT to provide the required support. Current active BDTs are Alaska District (POA), Seattle District (NWS), Tulsa

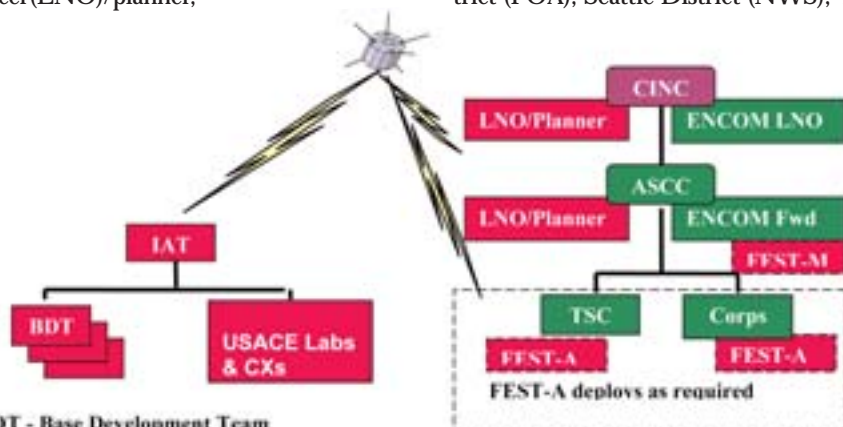
District (SWT) Ft. Worth District (SWF) Little Rock District (SWL), Louisville District (LRL), New England District (NAE), Baltimore District (NAB) Honolulu District (POH) and Mobile District (SAM).

Beyond the BDTs, the Corps labs of the Engineer Research Development Center (ERDC), CXs (such as the Huntsville's Ordnance and Explosives Center) as well as other government agencies are providing valuable specialized support either directly to the IAT or supplementing BDT staff.

To date, the IAT has worked more than 500 Requests for Information (RFIs) for reach-back support, most with very short suspenses. In fact, the typical time for most RFIs is about three days. The shortest RFI handled by the IAT had a suspense of one hour.

The type of RFIs received and processed by the IAT has varied from a full range of technical support and research to unique and specialized requests. For example, we have:

- Provided quick repair guidance to fix war damaged bridges.
- Provided site layouts for tent cities.
- Provided designs for entry control points (ECPs) to military facilities.
- Provided preliminary floor plan designs to convert warehouses to barracks.
- Provided quick fix force protection measures around buildings and military facilities.
- Coordinated with the St. Louis District on locating as-built drawings for facilities. built in the 1950s and Iraqi facilities built by European engineering firms.
- Helped locate sites for landfills and base camps.
- Provided preliminary design for a postal distribution facility and food service facilities.
- Researched design requirements for border crossing, locating under ground tunnels and provided flood prediction data.
- Talked "face to face" with deployed engineers via TeleEngineering.



BDT - Base Development Team
IAT - Infrastructure Assessment Team
CX - Center of Expertise



SPIRiT Validation Team reports its findings

by John A. Scharl

Sustainable Design and Development (SDD) became Army Policy in the year 2000 and in June 2001, the Sustainable Project Rating Tool (SPIRiT) was mandated as the method for evaluating sustainability for all Army projects starting with the FY 02 MCA program.

In June 2003, Dr. Mario Fiori, former Assistant Secretary of Army for Installations and Environment, asked the Assistant Chief of Staff for Installation Management (ACSIM), "How does the Army know when a project is SPIRiT Gold? What is the process used to assess, score and validate MILCON projects for sustainability?"

To demonstrate that the Army has a credible way to validate SDD and the SPIRiT scoring process, the ACSIM formed an evaluation team with representatives from the ACSIM, the Installation Management Agency (IMA) and the U.S. Army Corps of Engineers. The team's task was to validate the application of the SPIRiT self-assessment process used by Military Construction Project Delivery Teams (PDT), identify observations, and provide recommendations to enhance the Army's SDD/SPIRiT process.

Six projects were selected from the FY 2002 MCA program based on their DD 1391s and estimated Beneficial



John A. Scharl

Occupancy Dates closest to the end of calendar year 2003.

The following projects were evaluated:

1. Communication Facility at Fort Gordon.
2. Barracks at Fort Lewis.
3. Barracks Complex at Fort Richardson..
4. Library and Education Center at Fort Polk.
5. Child Development Center at Fort Meade.
6. Physical Fitness Center at Fort Meade.

Since the SPIRiT policy was issued after many FY 2002 projects were defined and their Program Amounts (PA) were

already established, opportunities to maximize the sustainability of these projects were, in some cases, limited. Under the circumstances, the project teams did an exemplary job of implementing the Army's SDD/SPIRiT policy. (Note: In 2003, the Assistant Secretary of Army raised the minimum sustainable goal level for MILCON projects from Bronze to Gold. Starting in FY 2006, for all MILCON projects designs initiated after March 2003 and for all future MILCON projects, the minimum SPIRiT rating is Gold. This policy applies to vertical construction and projects planned or designed under the Residential Communities Initiative.)

Team Findings. The team concluded that given an opportunity to apply SPIRiT and set sustainable goals at the inception of the project's planning and scope phase, PDTs can achieve the SPIRiT Silver level for all projects and low Gold for most projects at no increased cost.

Having the installation/garrison commander's commitment and DPW staff's participation is key to the success of any policy, especially one such as SDD, which encompasses the life cycle of Army installations and their facilities. However, the observed levels of SDD commitment, awareness and participation at

(continued from previous page)

- Communicated with Iraqi power plant operators utilizing pen and pencil sketches to describe engineering details live during Video Tele-Conference (VTC).
- Provided assistance to military units in restarting power generation plants in Iraq.
- Been extra hands and minds for the Forward Engineers, providing them with a staff of experts with skills not found in military units.

How does the IAT meet the short suspense on over 500 RFIs? Through the expert assistance of our BDTs and reach-

back partners. RFIs come to the IAT via SIPRNET, NIPRNET (Non Classified Internet), phone call, or IAT Web Site. The IAT evaluates the request and confirms it falls within the guidelines of FFE, identifies the most appropriate resource to work each RFI (District, CX BDT, etc.), or whether to process by the IAT staff.

The IAT staff processes RFIs which relate to the IAT's Geographic Information System (GIS), very short suspense items, and general research assistance. If not, then the BDT on-call is notified and the RFI is sent to the BDT. The on-call BDT is rotated weekly, with each on-call BDT team prepared for 24-hour on-call status. The BDT team works with the deployed requestor to provide the requested data, information, design assistance, etc. within the required

timeframe. This usually involves working nights and weekends and, quite often, extended hours. The IAT requests estimates and reviews the estimate of work, processes funding, archives all final deliverables and coordinates responses back to the deployed requestor. The result of the archived RFI, along with guidance documents and reference data, is posted on the IAT website for future use and reference. The IAT website is available to all with SIPRNET access.

POC is Warren Neiden, (251) 694- 4031, e-mail: warren.e.neiden@sam.usace.army.mil

Carl L. Burgamy, Jr. is the IAT Master Planner. PWD



(continued from previous page)

SPiRiT SCORES AND RATINGS	LEWIS	RICHARDSON	POLK	GORDON	MEADE	CARROLL
Project Delivery Teams Self-Assessment Scores	31/Bronze	25/Bronze	50/Silver	68/Gold	40/Silver	32/Bronze
Validation Team's Scores	43/Silver	26/Bronze	55/Gold	70/Gold	38/Silver	28/Bronze

installations/DPWs, appears to be inconsistent at best.

Therefore, Installation Master Planners and Energy Managers need to be actively engaged in the SPiRiT assessments as early as possible in the project concept/definition phase. Master planning and energy management decisions can significantly affect the final scoring of the project.

The current approach for programming MILCON projects is primarily based on "first costs" with little or no real consideration of life-cycle savings in terms of energy, operations, maintenance, and the productivity of building occupants. This continues to be one of the greatest barriers to achieving true sustainability in Army facility projects. Present policies also limit project costs shown on the DD 1391 by prohibiting a separate line item for sustainability. Projects must stay within the DoD approved unit cost construction factors, which do not consider sustainable features.

Unfortunately, these construction programming and approval practices are significant inhibitors for installations' PDTs. If life cycle cost effective measures are considered at all, it is only when the project costs remain below the project PA. Consequently, continued application of current MILCON program policies and practices may impact achievement of higher SPiRiT Gold and Platinum ratings.

The project teams were, in most cases, very conservative in setting their SPiRiT project goals and awarding points when scoring the projects. The one exception was the Fort Gordon 'Communications Facility' project. Their project team met the holistic championing "spirit" of the Army's SDD/SPiRiT policy by applying these elements of sustainable design:

- Established an Integrated Project Team early in project's conceptual phase that included the key representatives from the Installation (DPW and building user).
- Applied and sustained a holistic plan, design and construction approach

throughout the project.

- Trained the Project Team on SDD/SPiRiT.
- Set Sustainable Goal(s) and conducted SPiRiT assessment early in the plan and concept development phase of the project.
- Updated SPiRiT score and rating through all phases of the project.
- Documented project's SPiRiT assessment/scoring rationale.

With the exception of the Fort Meade and Camp Carroll projects, the team's evaluation validated higher SPiRiT scores than any of the Project Design Teams. The altered scores resulted from differences in interpretation of the SPiRiT criteria requirements.

The Validation Team made the following recommendations:

- Establish a Process Evaluation Team to address SDD/SPiRiT Cost and Resource Issues.
- Change MILCON project program and approval process to consistently apply life cycle cost analysis so that it supports including sustainable practices and technologies in project designs.
- Require that each project presented to the Project Review Board include specific SDD features, SPiRiT score/rating, and costs.
- Incorporate SDD practices and features (SPiRiT criteria) in the Army's Facilities Standardization process, and conduct annual SDD/SPiRiT Reviews with IMA Regions, DPWs and USACE Design Districts/Project Managers.
- The Installation Management Agency (IMA) should issue SDD/SPiRiT guidance to Garrison Commanders that encourages DPW staff's participation in the project charrette planning and SPiRiT scoring process.
- Establish SDD/SPiRiT Points of Contacts at each IMA Region and Installation.
- Publish reinforcing SDD/SPiRiT guidance to IMA Regions and Garrisons.

- The Army Corps of Engineers should update the SPiRiT criteria to reflect the lessons-learned and any changes to other similar rating systems identified since the inception of SPiRiT policy.
- Provide technical guidance for typical sustainable practices and technologies, presenting implementation costs and benefits for easy use by project teams.

The Army continues to progress toward its goal of integrating SDD principles and practices into facility plan, design and construction process. By applying the Validation Team's recommendations, project teams can achieve Silver and low Gold SPiRiT ratings without additional project costs. At the same time, the Department of Defense should clarify the objectives and strategies for incorporating SDD in to the MILCON program and execution process. Some examples of these objectives include, how to capture and consider project costs for sustainable features and the corresponding life cycle cost savings.

SPiRiT will continue to be the Army's tool for measuring our project's sustainability. However, in the interim, the Army will continue to work towards a transition to the U.S. Green Building Council's Rating System - Leadership in Energy and Environmental Design (LEED).

Currently, the Army Audit Agency (AAA) is scheduled to evaluate the SPiRiT ratings of FY 2003 MCA projects and identify the cost implications of SDD. The Army is also considering having AAA validate SPiRiT project ratings on an annual basis.

The team's final report will be available on the ACSIM FD's SDD web page at <http://www.hqda.army.mil/acsimweb/fd/linksSDD.htm>.

POC is John A. Scharl, (703) 601-0700, e-mail: john.scharl@hqda.army.mil

John A. Scharl is a general engineer in the Facilities and Housing Directorate/Policy Division, OACSIM. **PWD**



USACE supports Army's Force Protection efforts on installations

by John Grigg and Wade Doss

Protecting the Army's Soldiers, civilians and their families where they live, work and train has always been a high priority. The Corps of Engineers is directly involved in implementing Force Protection measures at Army installations across the world by managing and executing the Access Control Point Equipment Program (ACPEP).

Born directly after and in response to the events of September 11th, the ACPEP has evolved into a \$300M program. The program supplies electronic and physical security equipment for vehicle and pedestrian gates (now called access control points, or ACPs) at 350 installations worldwide. The Corps' Huntsville Center was selected by HQDA to centrally manage the program with the geographic Corps Districts executing the work at their respective installations.

The objective of the ACPEP is to improve gate security and personnel safety, and reduce traffic congestion, while maintaining vehicular access control according to the current Department of the Army (DA) Standards for ACPs. The ACPEP consists of three phases: 1) purchase and delivery of mobile equipment, 2) conduct of site surveys of all Army installation ACPs and 3) purchase and installation of fixed ACP equipment at all Army installations.

Phase 1 includes hand-held explosive detectors, desktop explosive detectors, X-ray machines, portable vehicle barriers, portable light sets, and under-vehicle search mirrors. To date, over 4100 pieces of equipment have been purchased at a cost of more than \$79M. Most of that equipment has been delivered or is on its way to installations worldwide.

One of the most useful items has been the VaporTracer2® hand-held explosive detector. Units deployed to Iraq use the device to detect minute trace elements found in explosives. Several attacks have been thwarted due to the capture of insurgents by Soldiers using the VT2.



The VT2 is a hand-held explosive detector.

Phase 2 includes on-site surveys during which a USACE District team, along with installation engineering and security personnel, identify improvements needed to meet the new DA ACP Standards. The teams make short and long term recommendations for improving the installation's force protection posture at the ACPs. To date, over 220 site surveys have been completed.

Based on the Phase 2 recommendations, Phase 3 provides the procurement and installation of permanent, fixed equipment. Typical ACP equipment includes closed circuit TV (CCTV) systems, intrusion detection systems, crash beam barriers, pop-up bollards, traffic control arms, and ballistic-rated guard booths. The Corps' Baltimore District awarded the first ACP installed equipment contracts recently for eight Army installations in the Washington, DC area. The Fort Worth District



The ground-retractable automobile carrier (GRAB) at Fort Hood.

also recently awarded a multi-million dollar contract modification to install the ground-retractable automobile barrier (GRAB) system at Fort Hood, Texas. The GRAB system is an example of how new technology is assisting in AT/FP efforts.

A real success story of the ACPEP is how this virtual team from around the world collaborates on such an extensive and widespread project.

The ACPEP Team consists of over 100 personnel from HQDA, IMA, MACOMs, USACE and private industry. Two of the Corps' technical Centers of Expertise (CXs) provide the security engineering support. Both the Electronic Security Center in Huntsville and the Protective Design Center in Omaha review all recommendations made by the Survey Teams to ensure compliance with current Army regulations and policy. The Installation Support Center of Expertise (ISCX) in Huntsville centrally manages the program and reports program status to HQDA.

The ISCX uses Engineering Knowledge OnLine (EKO), a mature web portal protected by AKO passwords, as a management, information and reporting tool. The EKO portal site has an accessible database of 350 Army, Army Reserve and Army National Guard installations, and a project tracking system (STATREP) that is compatible with IFS.

The ACPEP Team is dedicated to implementing Army-wide standards for ACPs and shares lessons learned through regular progress reviews and EKO. If you would like to know more about the program, please contact John Grigg, Program Manager, 502-645-1401, or Wade Doss, Deputy Program Manager, 256-895-1524.

POC is John Grigg, (502) 645-1401, e-mail: john.w.grigg@usace.army.mil

John Grigg is the ACPEP Program Manager and Wade Doss is the ACPEP Deputy Program Manager, Installation Support Directorate, Huntsville Engineering and Support Center. PWD



Installation Status Report (ISR) - 2005 Infrastructure update

by Linda Smith

The Army Installation Status Report (ISR) Program, AR 210-14, establishes the annual requirement to assess the condition of installation infrastructure.

This program involves a significant Army-wide data collection process in which the "user/tenants" or primary users of facilities evaluate over 150,000 facilities worldwide using Army-wide inspection standards. This annual evaluation contributes to defining overall infrastructure readiness and calculates estimated restoration costs to improve the quality of facilities.

On 1 April 2003, the Army's Assistant Chief of Staff for Installation Management (ACSIM) directed a study to update ISR Infrastructure. His primary concerns were:

- Subjectivity of existing ISR rating standards
- Use of critical components to calculate infrastructure ratings and estimated restoration costs
- Need for training user/tenant facility raters at installation level

The ACSIM recommended, based on the 1 October 2003 decision brief, that ISR

standards, methodology and processes be updated for 2005. This update will include:

- Revision of existing rating standards booklets to:
 - Reduce subjectivity in the standards for use by user/tenant rater
 - Introduce weighting for ISR facility components and elements within those components, thus eliminating critical components.
- Development of cost factors at facility component level to calculate estimated restoration costs for individual facilities.
- Expansion of facility ratings to include a 'mission support' rating, in addition to the 'quality' and 'quantity' rating. The 'mission support' rating will assess the manner in which the facility supports the accomplishment of assigned units. For example, a top quality vehicle maintenance facility would receive a low mission support rating if the assigned unit had vehicles that were too big for the bay doors.
- Quality ratings developed in alignment with OSD's policy for Q-ratings.

- Standardized training for facility inspectors at installation level.
- Overall readiness ratings for the nine facility classes within ISR infrastructure.

A six-person team began executing the 2005 update plan on 1 December 2003. All required changes will be completed by 31 December 2004, in time for the 2005 data collection, beginning January 2005.

Testing of the draft standards booklets are scheduled at four Army installations in late June and July 2004. Those installations are: Forts Lee, Bragg, Campbell, and Meade. Identification of an Army National Guard and US Army Reserve location for testing is in progress.

POC is Linda Smith, (703) 604-2442,
e-mail: Linda.smith@hqda.army.mil.

Linda Smith is the ISR Program Manager, Plans & Operations Division, OACSIM. PWD

New Army standard/standard design for consolidated Fire/Police/Safety facilities

The Office of the Assistant Chief of Staff for Installation Management (OACSIM) is co-chairing a new Facilities Design Team with the Office of the Director of Army Safety and the Office of the Provost Marshal General that will design a consolidated Fire/Police/Safety (F/P/S) standard to prevent deviations from Army design and construction stan-

dards. The Army standard/standard design (AS/SD) for the consolidated F/P/S is scheduled for completion in the first quarter of FY06.

Coincidentally, a tri-services group is nearing completion of a Unified Facilities Criteria (UFC) for fire stations that will meet the minimum for Army fire stations. It is currently scheduled for approval in the

2nd quarter of FY05. We intend to use this new UFC for fire stations as the fire station portion (module) for new consolidated F/P/S facilities.

POC is Bruce Park, (703) 602-5805,
e-mail: bruce.park@us.army.mil PWD



"Recycling" Army recycling policies

by William F. Eng

Army installations worldwide disposed of 74,000,000 pounds more of solid waste in fiscal year (FY) 2003 than they did in the year before, which equates to a four percent increase. Unfortunately, the amount of materials recycled declined more than 22 percent during the same period. This is alarming! The trends are exactly opposite of where we should be heading.

The Department of Defense is operating under a Pollution Prevention Measure of Merit (MoM) for solid waste diversion dating back to 1998. The MoM mandates that each of the Military Services and Defense Agencies achieve an annual diversion rate of 40 percent by FY 2005. In FY 2003, the Army diversion rate was around 37 percent. Installations must take great strides over the next 15 months to meet the DoD goal by the end of next fiscal year!

In the works are two ACSIM initiatives to help installations and the Army, as a whole, to make the 40 percent diversion rate. The first initiative is to refocus ourselves to view recycling not as a single, stand alone program, but an integral part of a powerful tool in the installation Integrated Solid Waste Management (ISWM) Plan. These are the highpoints of the first initiative:

- Practice integrated solid waste management - take a holistic view of solid waste stream.
- Initiate (or reinforce) mandatory recycling programs; establish a cost-effective Qualified Recycling Program (QRP), where none now exists.
- Minimize Construction & Demolition (C&D) debris going into landfills.
- Reduce packaging/shipping materials through affirmative procurement practices.
- Compost green wastes (tree and shrub trimmings, grass clippings, leaves, and organic wastes from commissaries, dining facilities, etc.).

ISWM is nothing new. The concept

appeared in the 1997 update of Army Regulation 420-49, Utility Services. USACH-PPM (U.S. Army Center for Health Promotion and Preventive Medicine) and USACERL (U.S. Army Construction and Engineering Research Laboratory) developed complementary tools for installations to prepare their own ISWM plans using either printed templates or a software program. Having a plan and actually using it as a roadmap are two different things.

While the spotlight may be on recycling, the underpinning has to be ISWM. If your installation already has a plan, you

included? What was once not economical or impractical under "normal" conditions may be the perfect solution, now.

If your installation doesn't have an ISWM plan, you should seriously consider putting one together, either by contract or DIY. This U.S. Army Corps of Engineers web site (<http://www.hnd.usace.army.mil/techinfo/C PW/pwtb.htm>) lists some ISWM planning tools. Another helpful aid prepared by USACHPPM, "Guide for Developing Integrated Solid waste Management Plans at Army Installations," Technical Guide 197,



are to be congratulated. But don't stop reading, you should pull out that plan and give it a reality check. How well does it track with what's actually happening on the ground? Are most of the troops deployed and the volumes and type of waste drastically different? Is the installation bursting at the seams with National Guard and Reservists, called up for duty in the Middle East? Are the assumptions still valid? Is there something left out that should be

can be downloaded at:

<http://chppm-www.apgea.army.mil/documents/TG/TECHGUID/TG197.pdf>

Installations that do not have or participate in a recycling program will either have to establish one or make a concerted effort to become part of someone else's. Whether a particular installation elects to have a basic recycling program, or go a step further and establish a QRP (Qualified



IMA announces Fire & Emergency Services Award winners

The Army's top fire department and fire fighters for 2003 have been announced by the Installation Management Agency. Here are the Army winners:

Fire Department of the Year

Winner: *Fort Bragg Fire and Emergency Services Dept, Fort Bragg, NC*

Co-Runners Up:

Fort Carson Fire and Emergency Services Dept, Fort Carson, CO

Fort Monmouth Fire and Emergency Services Dept, Fort Monmouth, NJ

Civilian Fire Fighter of the Year Award

Winner: *Firefighter Gerald W. Schiedewitz, Fort Knox F&ES Dept, Fort Knox, KY*

Runner Up: *Firefighter/EMT Chae Tae Pyong, Camp Red Cloud F&ES Dept, Korea*

Military Fire Fighter of the Year Award

Winner: *SGT Troy V. Elerick, Fort Lewis F&ES Dept, Fort Lewis, WA*

Runner Up: *None*

Civilian Fire Officer of the Year Award

Winner: *Captain Dennis Micheli, Fort Carson F&ES Dept, Fort Carson, CO*

Runner Up: *Captain Thomas Caruso, Fort Monmouth F&ES Dept, Fort Monmouth, NJ*

Military Fire Officer of the Year Award

Winner: *SSG Michael D. Anderson, Montana ANG*

Runner Up: *None*

Fire Fighter Heroism Award (Team Awards)

Winner: *SSG Kelly R. Merz, SGT Derrick L. Smith, SGT Robert Gonzalez, SPC Shane D. Brown, SPC Christian L. Miles, and SPC Robert C. Simmons, 562nd Engineer Detachment, USAG, Fort Leonard Wood, MO*

Runner Up: *Firefighters Michael Boulterice and Dennis Kilcullen, Watervliet Arsenal F&ES Dept, NY*

Congratulations to all!

POC is Dale Means, IMA/MPRI, (703) 602-3390, e-mail:

Dale.Means@hqda.army.mil **PWD**

(continued from previous page)

Recycling Program) and thereby receive monetary proceeds from the sales of qualifying materials, is a command decision. The bottom line is that as much solid waste as economically possible is kept from going into a landfill, either owned by the Army, a municipality or a commercial business, or to an incinerator. Even though the revenue received from the sales of recyclable materials may be small and not enough to cover expenses, the costs avoided from the reduced amount of landfilled or incinerated wastes will be a net benefit to the installation.

The second initiative addresses the single largest category of solid wastes that an installation may produce during a given year, although there may be times when there are none. What we're talking about is construction and demolition wastes, also called C&D debris. Up to 80 percent of an installation's solid waste could be made up of C&D wastes, according to the USACERL. This may not occur year in and year out, but it's certainly a vast quantity of materials produced when excess

buildings are demolished, or one in the footprint of a new MCA or AFH-C project has to be removed.

Old, obsolete buildings can be demolished by clawing apart or bulldozing into a pile of rubble and picking up and hauling away to a dump site or C&D landfill. On the other hand, with a little planning ahead, someone with a bit more time, patience, and know how can take a building apart and preserve the integrity and usefulness of the building materials. What are the benefits of deconstruction? An installation could not only keep all this rubble out of its own landfill or save the cost of disposal off-post, it could also create a large stockpile of reusable building materials (lumber, windows and doors) for sale or donation for private construction projects. Crushed concrete and asphalt can be used on many installation construction projects as erosion control, subgrade materials, etc. and save the cost of buying new.

A guide specification already exists: Unified Facilities Guide Specification (UFGS) 01572, Construction and Demolition Waste Management, which can be tailored to suit each installation's needs. Intended for new construction, this UFGS

can be used in O&MA maintenance and repair projects or minor construction projects as well. Deconstruction of buildings is one way to achieve higher diversion rates for C&D. Technical information on deconstruction and other means for reducing C&D wastes are available at the same Corps of Engineers web site shown above.

Installation C&D management plans have been required to be prepared and made part of the ISWMP since August 2001. Under the second initiative, all future Military Construction, Army (MCA) projects, Army Family Housing - Construction (AFH-C) projects and Facilities Reduction Program projects will have to include planning for the diversion of C&D waste. This initiative provides added incentive, since no MCA, AFH-C or FRP project will be funded without a C&D waste management plan.

POC is William F. Eng, (703)602-5827, e-mail: William.eng@us.army.mil

William F. Eng works at HQDA, ACSIM on utility issues, specifically solid waste, recycling, water and wastewater. **PWD**



Fort Stewart sets the modularity standard

by Anna Chafin

To help support the Army Chief of Staff's reorganization of the 3rd Infantry Division (ID) from Brigades to smaller, self-contained "Units of Action" that will fight independently on the battlefield, Fort Stewart's DPW has been working at a record-setting pace to lay the groundwork for construction of \$70+ million, temporary facilities for unit of action 4 (UA-4).

Fort Stewart was chosen as the first installation to participate in the Army's reorganization. As a result, the 3rd ID is reorganizing from three brigades to four units of action. Soldiers are already arriving at Fort Stewart to complete the fourth unit of action, UA-4. By mid summer, all the Soldiers in UA-4, approximately 3700, will be at Fort Stewart, and temporary and permanent facilities are and will be required to support the new unit of action.

"Since Fort Stewart is the first in the Army to get in to the modularity business, we had to start from scratch and develop a master plan for construction of temporary and permanent facilities to accommodate UA-4," explained COL Michael Biering, Fort Stewart/Hunter Army Airfield Directorate of Public Works (DPW). "Not only did we have to develop a plan from the ground up, but we also had less than five months to have temporary facilities in place for UA-4. After receiving a loosely defined description of UA-4 for the first time on 4 February 2004, we knew we didn't have much time, and we also knew it was important to perform as effectively and efficiently as possible. We knew there was little room for error."

Before construction, DPW personnel tackled several challenges in planning for modularity at Fort Stewart. For one, Fort Stewart addressed mission related planning questions. To do so, DPW Master Planning first obtained the make-up and mix of the new unit of action from the G7. Additionally, Fort Stewart DPW procured the battalion and company personnel counts, which clued planners in to single versus married ratios, as well as rank breakouts. Likewise, DPW determined whether units

would be stationed on-post and which ones would be new to post. Before completing mission planning, Fort Stewart Master Planning identified which facilities were in use by current units, their expansion capabilities, and their condition and proximity to one another.

The DPW says he and his staff also addressed site and infrastructure planning questions like: 1) Are we siting on an appropriate Land Use Type? 2) Is this proper long-term use of this land? 3) Is the site large enough to provide for green space, PT fields, ample parking, and growth/expansion (additional battalion)? 4) Are the transportation networks adequate? 5) Is timber harvesting required? 6) Are the utility systems adequate?

Specifically, DPW Master Planning was responsible for selecting a site large enough to accommodate the requirements for the temporary facilities, the difference between the space available and what is needed, while meeting the needs of the Fort Stewart Garrison Commander, Colonel John Kidd, for all facilities to be within walking distance of each other. DPW Engineering developed site designs and established criteria for all facilities associated with UA-4.

For facilities planning, Fort Stewart DPW had to ensure sufficient administration space, maintenance facilities, billets, dining facilities, training areas, Soldier support centers, and community support facilities were considered. Temporary facilities alone will include 20 company operation facilities, 20 arms vaults, 852 barracks spaces, 3 battalion headquarters, and 2 motorpools.

Of course, the construction of temporary and permanent UA-4 facilities cannot happen without taking funding into consideration. Funding is required at every stage of UA-4, including preparation and/or execution of the planning documents, planning charrette, Environmental Assessment, and design charrettes.

During the planning stage, Fort Stewart Master Planning, with direction from the Department of Army (DA), the Instal-

lation Management Agency (IMA), and the Southern Regional Environmental Office (SREO), examined funding sources like Other Procurement, Army (OPA); Operations and Maintenance, Army (OMA); Unspecified Minor Military Construction, Army (UMMCA); and Military Construction, Army (MCA). Most notably, the Secretary of Defense authorized execution of UA-4 under 10 U.S.C., Emergency Construction, for site preparation and utility installation. Biering noted that this type of reprogramming of funds has not been on record since World War II.

Fort Stewart DPW also addressed potential environmental concerns associated with the UA-4 project site. "Fortunately, our Environmental Division had prior knowledge of growth on Fort Stewart and were able to focus their efforts in this area. Taking a visionary look months before UA-4 got off the ground, our Environmental folks anticipated increases at Fort Stewart and shifted their day-to-day emphasis to available cantonment growth space. Before UA-4 construction began, they were able to complete a cultural resources survey and determine the area was free of any concerns, delineate wetlands, designate the area as non-forested in both our Endangered Species Master Plan and Integrated Natural Resources Management Plan, complete an infrastructure impact analysis, and conduct a traffic study," relayed the DPW.

Getting out in front of UA-4 did not eradicate all environmental obstacles; it merely lightened the load. DPW Environmental also had to complete an Environmental Assessment. Typically, an Environmental Assessment takes six to eight months, but Fort Stewart broke all records and completed one in 45 days, still producing a quality document. Biering attributes the quick turnaround to past Environmental Assessment experience, as well as strong community and State relationships. He was able to justify an emergency in order to get the public review period reduced from 30 days to 15 days (per approval from Director of SREO). ➤



(continued from previous page)



The entire process took 51 days start to finish. Before handing things over to the engineers, Fort Stewart DPW Environmental, with the help of the Savannah District Corps of Engineers (COE), contracted with multiple loggers to be on site at one time, and they completed the clear-cut of 131 acres in 16 days.

Facing a short suspense also threw Fort Stewart DPW another planning curve. "We had two sets of rules to go by: one for temporary facilities and another for the permanent complex," explained Biering. "In terms of temporary facilities planning, the engineers, master planners, and environmentalists were scratching their heads over how quickly the soldiers were coming, how long it will take to get facilities ordered/procured/constructed, if temporary facilities have to meet design standards, and what can we install quickly that can be used both by temporary and permanent facilities. After tossing around several scenarios, we decided to site the temporary facilities on the periphery of the proposed UA-4 location and leave room for construction of the permanent facilities in the interior area."

Fort Stewart DPW could not just think short term. The UA-4 master plan forced thinking about the big picture: the permanent complex. To help establish a game plan for the permanent complex, Fort Stewart DPW involved all organiza-

tions and directorates on-post. Fort Stewart conducted a required planning charrette, which lasted 10 days. The process included everything from meeting with the Unit responsible for Force Structure and walking the proposed sites to conducting in-progress reviews with key 3rd ID and installation staff and developing alternative sites.

Currently, Fort Stewart DPW is beginning to see several months of hard work come to life. After the Savannah District COE, with the help of Fort Stewart DPW Engineering, drafted the Request for Proposals for the solicitation of the construction contractor based on the scope of work provided by DPW Master Planning, the Savannah District COE solicited for the contractor, evaluated the proposals, and awarded the contract. Incidentally, Colonel Biering strongly feels that his choice of the COE as the single turnkey project manager was the right one, with current results speaking for themselves.

The UA-4 construction contract was awarded on 25 May 04 with receipt of notice to proceed the following day. The Savannah District COE and DPW Engineering are presently providing oversight of the construction process, and the area in and around 6th and 15th streets at Fort Stewart is bustling with activity directly associated with construction of the first phase of UA-4, the temporary facilities. Construction workers are working on three separate temporary facilities sites simultaneously, round-the-clock, seven days a week, 24 hours a day. Temporary facilities are slated for completion by late July to early August 2004, and construction of the permanent complex will begin in 2005.

UA-4 has challenged Fort Stewart to raise the bar and set the modularity standard relatively high. Luckily, Fort Stewart DPW has been up to the task. "We are proud to be the first Army installation to ride the modularity train," stated Biering. "We have been working tirelessly since February, but we realize our efforts will allow Soldiers at Fort Stewart/HAAF to better train to be the world-class fighting force they are."

POC is COL Michael Biering, (912) 767-8356, e-mail: Michael.Biering@stewart.army.mil.

Anna Chafin is a public relations specialist with TAD Technical providing support to Fort Stewart/HAAF's Directorate of Public Works, Environmental Division. PWD





Installations make most of early receipt of SRM funds

Fort Knox

The Installation Management Agency's (IMA's) distribution of SRM funds to installations early in the fiscal year was a welcome change at Fort Knox compared to the past paradigm where DPWs had to endure receiving SRM funds very late in the fiscal year.

This business practice change has been good for the Soldiers, families, and civilian workforce here in providing quality infrastructure and facility projects, both quicker and at less cost than has been typical of past practice.

DPWs know the various drawbacks that ensue with late fiscal year project funding. That approach severely taxed both DPW staff and installation contracting personnel. When a year's worth of processing solicitation packages had to be done by 30 September, the best and least cost product was not always obtained. As limited staffs had to process many projects concurrently in a short time-frame, mistakes or oversights sometimes resulted in the designs and contracts.

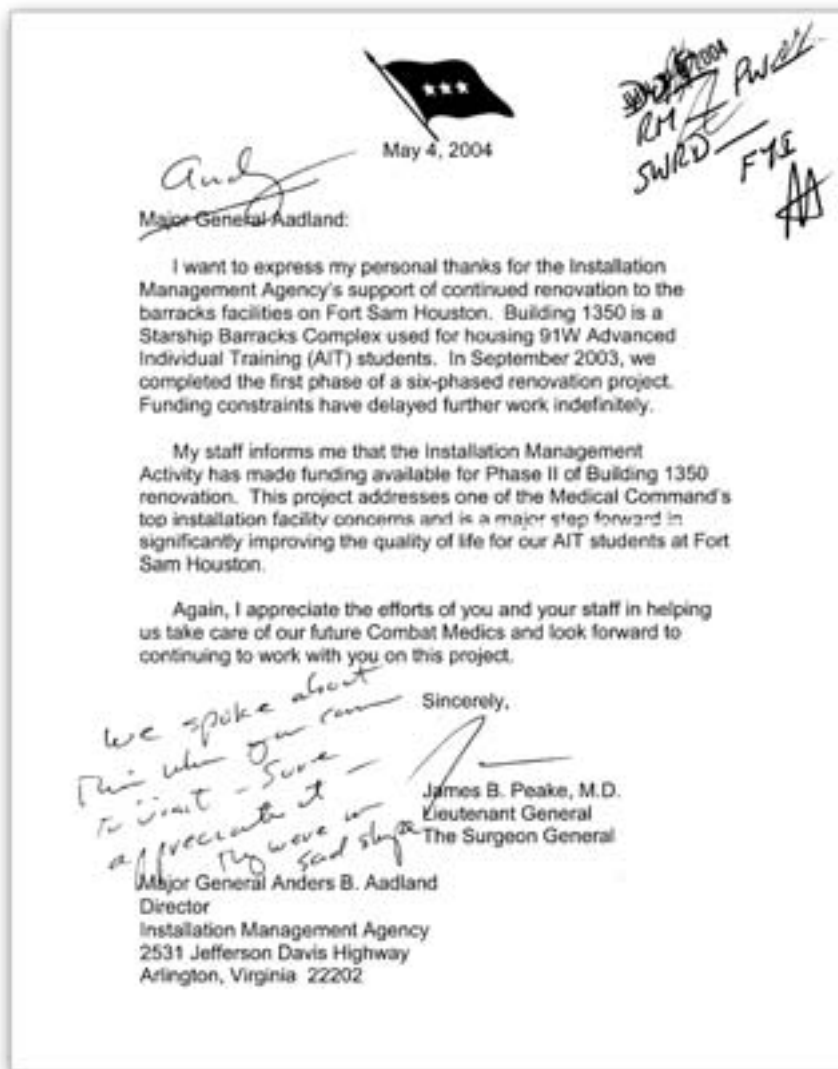
And all potential government contractors fully understand the annual budget process. For negotiated procurements, they realize the pressures on government personnel to finalize negotiations and get the award completed before the end of the month or risk "losing the project." Under those conditions, it is reasonable to believe the project was not always awarded at the best price.

The other significant drawback with a September award is that in Kentucky, the best construction season is drawing to a close with the cold weather that late fall and winter bring. Consequently, the completion and benefit of many infrastructure projects are delayed because their start

area and pothole-filled physical training running routes have been resurfaced throughout the 1st Armor Training Brigade area as the warmer temperatures of springtime permitted the local asphalt company to resume production after their normal winter shutdown. Trainee

injuries that threaten completion of basic training due to twisted or sprained ankles caused by poor running surfaces are not as likely to occur now.

- Failing boilers have been ordered and are being replaced during the non-heating season without impact to building occupants. Replacement air conditioning equipment was ordered and many have already been installed before we begin the hot summer weather.
- Exterior paint contracts were put in place last winter and the contractors were able to start their work preserving building exteriors and water towers from further deterioration at the first signs of warm, dry weather.



must be delayed until good weather resumes the following spring.

As summer begins, we are now reaping the fruits from the seeds planted in the 2nd quarter of FY04, when IMA released SRM funds to the installations. Many examples are available:

- Deteriorated streets in the cantonment

upcoming cooling season. Having programs ready to execute and being able to execute them early improved the installation's ability to service infrastructure needs and customer needs throughout the year, especially customer year-end requirements.



(continued from previous page)

Fort Sill

About 50% of the facilities on Fort Sill do not have a working fire alarm system that automatically alarms the fire department should a tragedy strike. To make matters worse, the system that was installed was a wire-based system, which they no longer make. So it was impossible to get any replacement parts. Our system was very old and just not working. This meant we had to change over to an entirely new radio-based fire alarm system. But the cost was around \$2 million.

Under the old system, we would have developed it, bid it, and waited until dollars became available (and \$2 million in one slug was usually difficult to obtain). But under the early authority, the project was awarded and is now in the process of being installed for the safety and welfare of Soldiers. Project Number PH00062-1J cost \$1,925,000, awarded by COE, Tulsa District.

Further, our electrical distribution system was in a deteriorated mode of operation. To make matters worse, it was deemed uneconomical to privatize and had a DOD waiver to the privatization process. But no one was coming forth with any funding to keep the system reliable. Some of the poles in use were so deteriorated that you could stick a ruler six inches into the pole before you hit anything solid. With the strong winds that this area receives, it was just a matter of time before we had major outages to our system. The early SRM funding allowed us to award this project, order and start installation of the poles.

Fort Sill is one of only five installations in the US Army that serve as Basic Trainee Sites, taking young civilians and turning them into Soldiers. We house these trainees in five large 1100-man "starship" barracks complexes. Each of these complexes receives its A/C cooling from a central HVAC plant with three large A/C chillers serving the facilities. These chillers were not only old and failing, but they had ozone-depleting chemicals, which made them an environmental hazard.

Under the early SRM authority, we were able to award the replacement of these chillers. This early authority enabled industry to make the new chillers (you do not

find these size machines on the shelf; they must be manufactured for the specific application), ship them, and install them in time so that the trainees had A/C service in May when the weather got hot. Without this authority, Soldiers would have been struggling to get any sleep in 100-degree-plus conditions.

Fort Sill has not spent any substantial money on its road network in the last decade. Consequently, many of the roadways were in very bad shape. It got so bad that two roads (Crane Road in front of 212th Bde Hqs and Knob Hill Road - the main east west passage for all heavy traffic) could not wait any longer for rebuild. The early obligation allowed us to get these awarded, and the work to be accomplished during the summer months (the best weather months). This will cause the least outage and disruption of post population.

Fort Sill awarded \$150,000 in new tree planting that will replace some of the trees lost in previous storms. If we do not replace these trees periodically, nature prairie will return and Fort Sill will not be the mecca it currently is to many of our occupants. Trees must be planted NLT February when sap is down to ensure maximum survival. The cost was \$150,000, awarded by Fort Sill DPW under TOC contract.

Fort Bliss

Due to early obligation of our SRM dollars, with the associated design and administrative effort, our design engineers were able to devote more time to the extremely large task of accommodating the mobilization of the 116th BCT.

Being able to make an early commitment of SRM funds, we were also able to receive \$300,000 in matching funds from the Chief of Chaplains for a chapel renovation project.

Finally, Fort Bliss obligated money early for range upgrades. This proved to be crucial when it came to supporting the increased mobilization mission at Fort Bliss. This certainly enhanced our ability to take the increased mobilization mission.

Fort Sam Houston

Fort Sam Houston was able to award six sustainment projects at \$2.6 million. These included a critical repair to the electrical distribution system for an eight-building barracks complex and critical repairs to four separate barracks buildings.

Fort Huachuca

Fort Huachuca was able to award several critical SRM projects for \$5.6 million. Among those were:

- Pavement repairs at Libby Army Airfield
- Re-pavement of the traffic circle
- Re-pavement of Hatfield street

Early award was critical for these projects because we were able to begin and complete work before the beginning of the summer monsoon season.

Fort Huachuca also completed three roofing projects for buildings with roofs that failed. Early award allowed us to complete these jobs before the summer monsoon season, thus saving us another year of potential water damage to these facilities. Early award enabled us to clean the supply air plenums in seven facilities on post; install additional lighting along the PT route, providing a safer area for Soldiers to do early morning PT; and clean and repair one of the water reservoirs on Reservoir Hill in the Old Post area.

Fort Hood

Early obligation of funds at Fort Hood meant success in repairing all 34 of the 4ID barracks prior to Soldiers' return in February 04. The availability of the \$10 million dollars allowed the execution of this project during the 60-day window of opportunity, correcting numerous deficiencies that had accumulated over the years as well as repainting that had been deferred due to lack of funds. The Soldiers returned to living quarters in the best condition possible. All reports back from the command and Soldiers were positive and appreciative.

In addition to that project, others are presently underway for the replacement of roofs, repairs to motor pools and repairs to water storage systems. All these projects had been deferred in the past, and would have gone unfunded at least to the end of the FY, if not longer. PWD



Historic post buildings get facelift

by Spc. Susan Redwine

Fort Huachuca has been around in one form or another since the last quarter of the 19th century. Established as a camp during the Indian Wars, the fort managed to survive and thrive for well over 100 years, and the legacy of this history is evident in the buildings on post.

"Fort Huachuca has the greatest collection of historic buildings in the state of Arizona," said Dr. Charlie Slaymaker, the historic property manager on post. The historic buildings are the only two-story structures in adobe in the state and are important because they are unique resources to Arizona, he said.

In 1976, Fort Huachuca was registered as a National Historic Landmark. There are 86 buildings in the National Historic Landmark District on post, which include buildings from Brayton Hall at the end of Brown Parade Field and the officers' quarters along Grierson Street to those on Henry Circle, Slaymaker said.

"They're unique," Slaymaker said. "These are adobe. You have a local technique for making the structures. There is nothing else like them. They're fantastic."

At some point in the life of these buildings, repairs need to be made and special care needs to be taken with the historic structures. Although they have received mitigating repairs, the first major effort that involves adobe repair on a large scale began recently, said Grace White, chief of family housing on post.

Because of the buildings' historic importance, all repairs and improvements are done in consultation with the Arizona State Historic Preservation Office, White said.

Quarters 2 is currently being rehabilitated, the scope of which includes replacing exterior stucco, repairing any bad adobe, repairing and replacing windows as needed, inspecting and repairing chimneys, replacing and repainting exterior wood trim and updating the interior electrical systems, White said.

The windows are being refurbished to the specifications as they first were, said Val Castro, the primary contractor working on the building.

Castro also noted that getting the adobe to repair the main structure of the buildings isn't easy.

"Adobe is such a specialty that you can't just find them [adobe makers] downtown," he said. "But we were able to find several craftsmen."

The craftsman who is making the adobe for the buildings has done it on a regular basis for many years and is a second-generation adobe maker, Castro said.

The process of making the adobe bricks involves forming the bricks and then letting them cure in the sun for several days before flipping them to cure the other side, Castro said.

Additionally, Slaymaker was involved

in ensuring that the adobes were made to the proper specifications for the buildings on post. The soil used in the adobes is from Fort Huachuca, just as it would have been when the post was first being built, Castro said.

After the adobe repairs are made, the exterior stucco coating must be replaced. The stucco that is currently on the building is cement-based and is not allowing the adobe to "breathe," Castro said. Therefore, a lime plaster will be used in the repair.

"It's been a long time since there's been a significant improvement on the exterior," White said.

The first two buildings scheduled for repair are Quarters 1 and 2. Once work on those is completed, repairs will continue on to the remaining historic quarters which are occupied by senior grade officers, White said.

"There is an obligation both legally and morally to preserve historic quarters," White said.

"We want to make sure the historic fabrication continues to be preserved," Slaymaker said. "The Army is doing a good job taking care of them."

Spc. Susan Redwine is on the staff of the Fort Huachuca newspaper Scout.

POC is Dr. Charlie Slaymaker, Fort Huachuca historic property manager, (520) 533-9089. PWD

Iowa Army Ammunition Plant initiates recycling program for fly ash

The Iowa Army Ammunition Plant (IAAAP) initiated an off-site fly ash recycling program on 10 May 2004. A cement manufacturing facility in Mason City, Iowa, analyzed a sample of the fly ash and found it to be acceptable for use in the manufacture of cement. The company followed the

test sample with a truckload of 22 tons of fly ash which proved to be satisfactory for their use.

The fly ash generated from the coal fired Main Heating Plant on the installation is loaded directly from the fly ash hopper into a tractor/trailer for transport to

the cement company. They are willing to accept all future generation of fly ash from the IAAAP.

The search for a source to take the fly ash began as a cost saving measure as the fly ash landfill was nearing capacity.





Fort Lee gets a new Regional JOC

by Bradford W. Hill

Job Order Contracting (JOC) is a favorite instrument at Fort Lee, Virginia, in executing Sustainment, Restoration, and Modernization (SRM) construction projects. On average, JOC develops and performs construction on projects ranging from as little as \$10,000.00 to as high as \$1 million. These are normally maintenance and repair, renovation, and small new construction jobs.

JOC is a crucial tool at Fort Lee to help meet its customers' construction requirements. It is a fantastic, economical tool, providing a rapid-fire procurement process and fast delivery of services as well as insuring a quality product.

Recently, Fort Lee acquired a new regional JOC contract involving three other installations in the Virginia Hampton Roads area. This is a fixed priced, 10-year contract covering Fort Eustis, Fort Monroe, Fort Story, and Fort Lee. The contract is administered by the newly established Northern Regional Contracting Center located at Fort Eustis. Centennial Contractor Enterprises Inc is the prime contractor for all four installations. In fiscal year 2004, this contract awarded approximately \$20



Bradford W. Hill

million in construction projects. With the recent addition of Fort Lee, that figure is expected to rise to \$25 million.

This contract provides tremendous benefits such as the consolidation of procurement resources, reduction in costs for the installations, as no fees are required for administration of contract, and continuity of resources between installations. Additionally, since the same contractor is being used for all four installations, personnel and subcontractors can be shifted between bases to fill in any gaps and provide quality services to installation customers.

All installations share the same unit price book (UPB), RS Means Facilities Data, used to develop and build costs for individual projects. The same multiplier/mark-up coefficient of .79 is added to all direct costs. The only differences are the locality factors added to costs that differ from one area to another. This UPB comes as a hard copy and is incorporated into cost estimating software. This is used by both government and contractor personnel who negotiate using the same data to develop accurate and competitive prices. Fort Lee has transitioned its current estimating software (EuroJOC) to incorporate the new RS Means Data under the new regional contract.

The flexibility of this new JOC contract allows Fort Lee to operate free of bureaucratic red tape. With all the added benefits, it provides an even better economical tool.

POC is Bradford W. Hill, (804) 734-5114, e-mail: hillb@lee.army.mil

Bradford W. Hill is the Chief, Job Order Contracting Branch, Directorate of Engineering & Logistics, Fort Lee, VA. PWD

(continued from previous page)



American Ordnance employee, Jerry Burnett, oversees loading 22 tons of fly ash into a semi for transport to a cement company for recycling. Recycling the fly ash from the Iowa Army Ammunition Plant's coal-fired heating plant saves landfill space.

This recycling program will extend the life of the on-site fly ash landfill, which has been in operation since 1985. At the present rate of fly ash generation, the remaining fill area would have been used within 2 to 3 years. The cost of a new landfill had been estimated at \$2,000,000.

The IAAAP currently generates about 1,500 tons of fly ash per year or about 68 truckloads. American Ordnance, the IAAAP operating contractor, located the source willing to accept the fly ash and is funding its transport to Mason City.

POC is Darlene Norton, (319) 753-7613, e-mail: darlene.norton@us.army.mil



Fort Lewis sports new deployment facility

by Andrea Takash

Soldiers deploying at Fort Lewis won't have to wait in the rain when weighing their vehicles because a \$32 million deployment facility is complete.

Unlike the old facility, everything is indoors or under cover.

The mammoth deployment facility comprises pallet handling, railhead and a transportation inspection point. The pallet handling area is a massive covered warehouse that will house pre-packaged pallets. The contractor added seven miles of rail to the railhead.

TIP, the transportation inspection point, is the stopping point for each vehicle to be weighed for axel weight and balance, inspected for leaks and loose material, washed, and de-fueled if it has more than a quarter of a tank of gas. If minor problems are found, there is a maintenance facility on the grounds.

Both TIP and the pallet handling are equipped with an infrared heating system to keep both the Soldiers and equipment warm when necessary.

"Marv's Yard" is also part of the facility. It houses larger container supplies that are be loaded directly on to 44-foot containers.

The Austin Company, the main contractor, impressed everybody with their customer service and attention to detail, said Brent W. Dvorak, Fort Lewis project engineer.

"The construction quality management umbrella, used by both the contractor quality control and the Corps quality assurance representative, was one of the keys to success on this project," Dvorak explained.

"The contractor had an excellent quality control system that was strictly enforced to achieve the quality specified."

Soldiers continued to use parts of the facility even while construction was going on. But this didn't put a kink in the schedule, according to Joyce Aldrich, Joint Transportation Directorate chief of plans and operations.

"Both the Corps and the Austin Company worked hard to ensure Soldiers could still redeploy and deploy using the existing facility," Aldrich said. "I believe The



The pallet rack in the new pallet handling facility will hold 10,000 pounds.

Austin Company truly helped in the war effort."

Frank A. Gonzales, The Austin Company project manager, said they were glad to help.

"This was our first project at Fort Lewis," Gonzales said. "The planning and coordination made it run smoothly."

Dvorak said the biggest challenge was ensuring there was no impact to the mission of Fort Lewis or the designated occupant activity.

"This problem was greatly reduced by good planning in the request for proposal, good coordination by the construction team, and the full cooperation of the Soldiers," he said.

Jim Clark, chief, Military Branch, agreed the project was a success.

"The project provides a 'world-class' intermodal, transportation point designed to efficiently process large military units, their vehicles and supplies from Fort Lewis to any theater of operation in a matter of just a few hours," Clark said. "The facility is a logistician's and Installation Commander's dream transportation facility."

Andrea Takash is a public affairs specialist, Seattle District, U.S. Army Corps of Engineers.

POC is Andrea Takash, (206) 766-6447, e-mail: andrea.m.takash@usace.army.mil **PWD**



A subcontractor installs support for inspection pit grating at the transportation inspection point.



New device monitors metal content in stack emissions at Tooele

by Dana Finney

A multi-metal continuous emission monitor tested at Tooele Army Depot, Utah, could greatly lessen the burden and cost of complying with the 1990 Clean Air Act Amendments (CAAA). Developed by the Engineer Research and Development Center (ERDC) in partnership with Cooper Environmental Services, Beaverton, Oregon, the device uses X-ray fluorescence to simultaneously check for up to 19 different hazardous metals as emissions exit the stack.

The new device is called XCEM, for X-Ray Fluorescence-Based Multi-Metal Continuous Emission Monitor. ERDC's Construction Engineering Research Laboratory (CERL) installed the prototype during FY02 on Tooele's conventional munitions furnace, which is the only one currently operating in the U.S.

"All demilitarization incinerators, both conventional and chemical, emit metals as byproducts of combustion," said Dr. James Hay, CERL project manager for the technology. "It's a difficult process to determine the metal content using traditional methods. To comply with increasingly stringent emission standards, the Army needed a faster, more accurate way to monitor emissions."

According to Dee Russell in Tooele's Ammunition Operations Directorate, current sampling procedures are not only cumbersome, but also expensive. "We have to spend \$600,000 every two years to do trial burns, which take two months to complete. Then all it tells you is what came out of the stack, which depends on what you put into the furnace and the different parameters used, such as temperature and feed rate," he said, adding that if any facet of production changes, new burn tests must be conducted.

The X-ray fluorescence component of XCEM is the analytical tool while an automated sampling system provides extractive batch sampling onto a resin-impregnated filter tape. When the tape is spent, it can be removed and analyzed to verify that the

monitor was working properly. XCEM samples the emissions every 20 minutes and a computer interface notifies the furnace operator if the level of any contaminant is approaching limits set by the U.S. Environmental Protection Agency (USEPA) National Emissions Standard for Hazardous Air Pollutants (NESHAP). If so, the operator can immediately invoke measures to control it, such as slowing the feed rate.

"XCEM is also advantageous because if there are chemical substances present that the technical data doesn't show, it will catch it," said Russell. "We base our burn tests on drawings provided by the munitions manufacturer, and if there would happen to be an error about any constituent, for whatever reason, this will prevent us

from inadvertently releasing something that could take us out of compliance."



XCEM unit at Tooele AD.

from inadvertently releasing something that could take us out of compliance." The monitor is interfaced with easy-to-use software that provides sensor integration, automation, quality assurance routines, automatic calibration, and report generation. According to Hay, another benefit of continuous monitoring at the stack is that the combustion process could be optimized.

"Using the data from the monitor, the operators can make adjustments that result in decreased emissions, better efficiency, higher production rate, and possibly eliminate the need for controls," he said.

Russell added, "If what's coming out of the stack is the most important concern,



Demil production plant at Tooele where monitor is installed.

why not use this type of monitoring and control it there. In a multi-million dollar operation, if we could just increase productivity by one percent, we would see a huge savings. It might also allow us to use the scrubbers less often, which would avoid producing hazardous wastewater."

XCEM is commercially available, costing about \$200K per unit. According to Russell, this is about one-half the cost of other systems Tooele evaluated, with replacement parts averaging about one-tenth as costly. "We were looking at products that cost half a million dollars to purchase, and the parts were outrageous." Some of the other off-the-shelf monitors also were difficult to operate and interpret results.

In addition to demilitarization furnaces, XCEM could have application at any other industrial plant that emits hazardous metals, such as cement manufacturers or coal-fired boilers. A spin-off technology called XCMM, which continuously monitors mercury levels, was evaluated in an EPA-sponsored test during summer 2003. CERL is seeking a demonstration site to install XCMM during FY04.

For more information about these monitors or any hazardous air pollutant (HAP) issue, please contact Dr. K. James Hay at CERL, (217) 373-3485, e-mail: Kent.J.Hay@erdc.usace.army.mil.

Dana Finney is the public affairs officer at ERDC/CERL. PWD



Fort Hood upgrades paint spray booth with mobile zone system

by Dana Finney

An innovative system that recirculates exhaust from paint spray booths is helping Fort Hood, Texas, comply with air quality standards at a greatly reduced capital cost over other treatment options. Developed by the U.S. Army Engineer Research and Development Center (ERDC), the Mobile Zone Spray Booth Recirculation System also improves worker safety and comfort through a climate-controlled cab.

Many Department of Defense installations have spray booths where paints and coatings containing volatile organic compounds (VOCs) are applied to vehicles, aircraft, and other equipment. The most common VOCs are aromatic hydrocarbons and ketones. These compounds evaporate and are released as air emissions. With changing requirements under the Clean Air Act Amendments of 1990, many DoD sites could fall into "non-attainment" status due to their VOC releases.



A catalytic Recuperative Thermal Oxidizer removes 95% of the VOCs and HAPs before discharging the exhaust air.

"Most installations with painting operations don't have VOC control systems installed," said Dr. K. James Hay, researcher at ERDC's Construction Engineering Research Laboratory (CERL). "But with air quality regulations becoming more stringent, many bases will be forced to take some action to bring their paint spray facilities into compliance."

Retrofitting paint spray booths with equipment to treat the typical 30,000 to 70,000 cubic feet per minute (cfm) air

flows can be very costly - running into millions of dollars. And while progress is being made toward finding substitute chemical agent resistant coatings (CARCs), high-VOC paints will still be mandated for use in some applications.

For example, "There are currently no plans to reformulate aircraft paints," said Robert Kennedy, Air Quality Program Manager at Fort Hood's Environmental Office. "At large depot-size facilities where painting is almost exclusively for aircraft, they're still going to have the VOC problem."

The Mobile Zone system works by recirculating air in the spray booth, which concentrates the VOCs. As a result, the amount of exhaust air released to the

air pollution control system is greatly reduced - to 2,000 cfm. This allows installations to save money by sizing their control systems much smaller. It also reduces energy use because it avoids conditioning the large volumes of clean air that conventional booths must supply for worker protection.

According to Hay, "We tied together the input, or fresh, air with the output air in a closed loop so that it travels in a circle. Filters remove the paint and particulates from the exhaust, and as the 2,000 cfm is pulled off, it's replaced with fresh air through the cab."

To provide a full four degrees of movement, the system includes a ventilated cab, which is suspended from tracks above the booth so that workers can reach any area easily. The cab meets Occupational Safety and Health Administration (OSHA) requirements for air flow to the worker, and it is air-conditioned for greater comfort during warm seasons.

Fort Hood served as the demonstration site for the system and is now using it full time. The side-draft, Directorate of Logistics paint booth that was retrofitted is Bay 4 of Building 88027, which handles both vehicles and aircraft. The amount of VOC-containing air previously exhausted from the booth was 38,000 cfm. This



The Mobile Zone cab provides a full four-degree of movement, allowing workers to move around the equipment to be painted.

would have required an air pollution control system costing \$1.5 million. The Mobile Zone system for the demonstration cost \$400,000, for a savings of 73%. The cost will vary for each new or modified paint booth, depending on the type of operation performed and air flow volume.

Using this new technology required Fort Hood to modify its standard air permit, which covers 10 large spray booths. The Mobile Zone spray booth will improve the paint application process, increase worker safety and voluntarily reduce VOC and hazardous air pollutant (HAP) emissions through the installation of a catalytic Recuperative Thermal Oxidizer (RTO). The system has a 95% removal efficiency and as a result of the emission reductions, Fort Hood could have set aside credits under the Emission Reduction Credit Program (ERCP). However, the decision was made to save these credits for possible use at a later date.





Wide-area assessment of UXO sites using an airborne multi-sensor approach

by Jerry L. Hodgson



Field calibration for airborne data collection.

The U.S. Army Corps of Engineers Omaha District, in partnership with the Colorado Department of Public Health and Environment, is currently executing unexploded ordnance (UXO) response activities at the Former Lowry Bombing and Gunnery Range (FLBGR), Colorado. One component of these efforts is wide area assessment (WAA) of the site using airborne remote sensing technologies. The WAA objective is to reduce the footprint of the 59,000-acre site to only those areas with known ordnance contamination. The WAA technology was designed

not to detect individual UXO or low-density target areas, but to detect and map areas of large concentrations of UXO such as bombing targets.

The development, testing and implementation of WAA techniques integrated several characterization technologies. These include:

- 1) synthetic aperture radar (SAR) for detection of surface and shallow subsurface targets;
- 2) hyperspectral imagery (HSI) for vegetation-related false alarm mitigation;
- 3) light detection and ranging (LIDAR) for micro-topography analysis, feature identification and data registration;
- 4) high-resolution color orthophotography for definition of ordnance related surface features; and
- 5) enterprise GIS technology for data management, visualization, and web data access.

The first step of WAA generates spatial target distributions quantifying positive SAR returns from dense ground objects.

Next, targets are discriminated based on identification of cultural, vegetation and topographic features derived from HSI, LiDAR and color orthophotography. Field calibrations refine SAR target identification procedures and verify performance specifications of SAR to detect dense surface objects. Target spatial distribution models are developed to represent the density, size, and dispersion of debris typical of bombing targets.

WAA results from the FLBGR are extremely encouraging and include: 1) exclusion of 10,000 acres (17%) because they were previously identified as areas of concern or surface cleared; 2) definition of regions of dense vegetative, terrain, or cultural features precluding reliable interpretation of imagery totaled 7,000 acres (12%); 3) Analysis of 42,000 acres (71.19%) of FLBGR resulting in 14 areas of interest, totaling 41 acres (0.07%) requiring field verification; and 4) definition of the remaining 41,959 acres (71.12%) as presumptively clean of bombing targets.

POC is POC is Jerry L. Hodgson, (402) 221-7709, e-mail: jerry.l.hodgson@usace.army.mil

Jerry L. Hodgson, P.E., is the project manager for the Military Munitions Response actions at the Former Lowry Bombing and Gunnery Range, Colorado.

PWD

(continued from previous page)

Under the ERCP, industrial operations can save and trade (or sell) emission reduction credits. Credits are measured in "tons per year" and range in price from \$400 to \$35,000 per ton. They can then use these credits to offset instances of non-attainment and thus avoid fines. "Another benefit of the Mobile Zone system is that it lets you bank credits because of the extremely low emissions. With all the construction going on at Fort Hood, that's potentially

going to be very helpful in keeping our cumulative emissions within permitted levels," Kennedy said.

Fort Hood's painting contractor currently is not using the mobile cab for painting aircraft out of concern for bumping into the components and causing damage. However, while the unit's controls were initially somewhat jerky, Hay said that recent mechanical improvements should preclude any such problem. "The system could be purchased without the cab, but it really does allow a much more com-

fortable environment and workers wouldn't need to wear 'moon suits'," he said.

Working through CERL, Mobile Zone Associates, Inc. designed the system at Fort Hood and can customize it for any operation.

For more information, please contact Dr. K. James Hay, (217) 373-3486, e-mail: Kent.J.Hay@erdc.usace.army.mil.

Dana Finney is the public affairs officer at ERDC/CERL. PWD



Byproduct of novel waste treatment system promotes plant growth

by Ryan Busby and Dick Gebhart

Researchers at the Engineer Research and Development Center (ERDC) are evaluating a new waste reduction technology that could one day not only replace landfills, but help restore damaged training lands as well. The WastAway Recycling System, developed by Bouldin Corp., grinds up municipal solid waste, sterilizes and breaks down organic molecules with high temperature and pressure steam, and separates the organic fraction, called "fluff," from the recyclable glasses, metals, and plastics.

Like composted garbage, this fluff could potentially be used as a soil amendment to increase organic matter and encourage plant growth. With Army training lands in constant need of rehabilitation, there is a great demand for such material. The main advantage this process has over composting is the lesser amount of time it

ment of Agriculture - Agricultural Research Service's (USDA-ARS) National Soil Dynamics Laboratory and the USDA-ARS Grassland Soil and Water Research Laboratory.

After an exhaustive analysis of almost 200 organic contaminants and heavy metals and an initial germination test using native grasses, the fluff was found to be suitable for performing field trials at the installation level. Native prairie grasses were selected for testing the material, as they are well adapted to nutrient-poor environments, widely used in land rehabilitation efforts across the country, and occur naturally in many states.

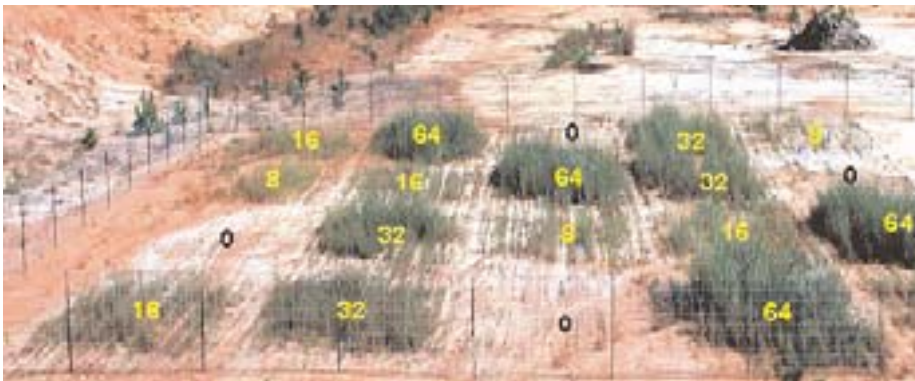
The Fort Campbell study was conducted during 2001-2003 using application rates up to 16 tons of fluff per acre. Plant species composition, cover, biomass, and soil physical and chemical analyses were performed



BouldinCorp's WastAway Recycling System.



Organic material, or fluff, produced by the WastAway System.



takes to generate a safe, usable product. With compost, 3-6 months are generally required, which usually limits the capacity of compost facilities. In contrast, the WastAway system takes about one hour to turn garbage into useful material.

ERDC's Construction Engineering Research Laboratory (CERL) conducted two studies to evaluate fluff as a soil amendment. These studies coincided with technology demonstrations at Forts Campbell, Kentucky, and Benning, Georgia, as part of CERL's large-scale demonstration and validation effort. Partners in the soil evaluation projects were the U.S. Depart-

ment of Agriculture - Agricultural Research Service's (USDA-ARS) National Soil Dynamics Laboratory and the USDA-ARS Grassland Soil and Water Research Laboratory.

ment of Agriculture - Agricultural Research Service's (USDA-ARS) National Soil Dynamics Laboratory and the USDA-ARS Grassland Soil and Water Research Laboratory. After an exhaustive analysis of almost 200 organic contaminants and heavy metals and an initial germination test using native grasses, the fluff was found to be suitable for performing field trials at the installation level. Native prairie grasses were selected for testing the material, as they are well adapted to nutrient-poor environments, widely used in land rehabilitation efforts across the country, and occur naturally in many states. The Fort Campbell study was conducted during 2001-2003 using application rates up to 16 tons of fluff per acre. Plant species composition, cover, biomass, and soil physical and chemical analyses were performed

These evaluations indicate that the material is well suited for returning organic matter to soils on degraded training lands, which is a necessary step in reestablishing productivity. It was also found that large amounts of this material can safely be land-applied, further enhancing its usefulness as a large-scale waste disposal alternative.

Warren County, Tennessee, is the only municipality in the United States currently using the WastAway System. This site is achieving a 95% recycling rate, with the bulk of the fluff used for horticultural purposes.

For more information about the soil amendment studies, please contact Ryan Busby at CERL, 800-872-2385, ext. 7508, email: r-busby@cecer.army.mil.

For information about the WastAway demonstrations, please contact Deborah Curtin at 217-398-5587. Related articles are posted on the CERL website, www.cecer.army.mil.

Ryan Busby is an ecologist and Dick Gebhart is a project manager, both in the Land and Heritage Conservation Branch at CERL. PWD



New options for managing solvent-contaminated wipes on horizon

by Beverly VanCleaf

Department of Defense (DoD) installations, like thousands of other industrial and commercial facilities throughout the country, generate solvent-contaminated industrial wipes. In the past, it has been Environmental Protection Agency (EPA) policy to defer decisions regarding regulation of these wipes to individual states authorized to implement the Federal Resource Conservation and Recovery Act (RCRA) hazardous waste program. This policy has led to different regulatory schemes throughout the nation.

In general, states tend to regulate disposable wipes as hazardous when contaminated with a listed hazardous waste or exhibiting a hazardous characteristic. On the other hand, many, but not all, states provide regulatory relief for reusable wipes sent to be cleaned and reused. In some cases, states have excluded reusable wipes from the definition of solid waste and, in other cases, they have been excluded from the definition of hazardous waste.

To address this inconsistency and to respond to stakeholder concern regarding over regulation of small quantities of solvent on wipes, EPA is developing a rule intended to provide regulatory relief for two broad categories of wipes: reusable and disposable industrial wipes. The term "wipes" is used for the sake of simplicity, to refer not only to wipes, but also other items such as solvent-contaminated rags and paper towels.

The proposal was published in the Federal Register on 20 November 2003; 68 Federal Register 65585. There has been considerable interest from the regulated community, and the public comment period was extended twice. The most recently established deadline for commenting was 9 April 2004. No deadline has been established for developing the final rule.

Under the proposal, reusable wipes would be conditionally excluded from the definition of solid waste. Wipes meeting the conditions could be managed as a

usable commodity and thus cleaned and reused without having to comply with either RCRA solid waste or hazardous waste regulations.

On the other hand, disposable wipes would be conditionally excluded only from the definition of hazardous waste. These disposable wipes would still be regulated as solid waste, but could be disposed at a non-hazardous waste facility.

Both exclusions would apply to wipes contaminated with spent F001 - F005 solvent; comparable commercial chemical products on the P or U list that have been spilled and cleaned up with wipes; and wipes exhibiting a hazardous waste characteristic due solely to the above F, P, or U listed constituents. However, 11 of the solvents would be ineligible for the land disposal exclusion due to concern over hazards presented even at low concentrations. These are: benzene, carbon tetrachloride, chlorobenzene, cresols (o,m,p), methylene chloride, methyl ethyl ketone, nitrobenzene, 2-nitropropane, pyridine, tetrachloroethylene, and trichloroethylene.

Other similarities between the two exclusions include proposed requirements to accumulate, store, and manage wipes in non-leaking, covered containers; to transport wipes in containers designed, constructed and managed to minimize losses to the environment; to allow intra-company transfer of wipes for the purpose of removing free liquids; and to require receiving facilities to reject wipes containing free liquids or remove and manage the free liquid as hazardous waste.

The two proposed exclusions differ as follows:

- Disposable wipes would need to be transported in containers labeled "Exempt Solvent-Contaminated Wipes," but reusable wipes would have no RCRA labeling requirement.
- Disposable wipes must be "dry" before land disposal. This is proposed to require either treatment by advanced solvent

extraction or to have less than 5 grams of solvent per wipe. Reusable wipes and wipes going for disposal via combustion are not required to meet the "dry" standard, but would instead be required to meet a "no free liquids" standard.

- Disposable wipes going for land disposal can not contain any of the 11 ineligible solvents, even if dry. However these 11 solvents are eligible for exclusion under the reusable wipe exclusion or if being disposed via combustion.

To further enhance the benefits offered by this rule, DoD identified several issues to EPA during the comment period. Issues raised include a request to expand the scope of the reusable wipe exclusion to other types of contaminants; to expand the scope of the reusable wipe exclusion beyond wipes to include other washable, reusable materials such as coveralls; to clarify how requirements regarding "intra-company transfer" of solvent-contaminated wipes will be interpreted to apply to DoD; and the importance of ensuring the final federal rule does not inadvertently prohibit practices currently allowed under State RCRA programs.

Regardless of whether EPA grants these requests, once finalized, this rule is expected to benefit DoD in the form of reduced hazardous waste management costs and increased recycling opportunities.

POC is Beverly VanCleaf (402) 697-2559, e-mail: Beverly.D.VanCleaf@usace.army.mil

Beverly VanCleaf is a regulatory specialist, USACE HTRW Center of Expertise. **PWD**



Heat – a valuable alternative to chemical wood treatment

by A. Lynn Hoch

Heat is now a practical and environmentally-sustainable method to control important international quarantine pests that impact the shipment of materiel worldwide.

The Department of Defense (DOD) purchases, warehouses, and transports globally, vast quantities of commodities much of which are packaged in or transported on both coniferous and hardwood non-manufactured wood packing products. Military equipment and supplies are also often braced during shipping with wood blocks commonly referred to as dunnage. These wood products can contain pests regulated by international agreements.

The pine wood nematode (PWN), *Bursaphelenchus xylophilus*, is responsible for the yellowing and death of various species of pine, fir, and spruce trees. While it is established in the US with only limited impact here, PWN could have a devastating impact on pine forests if it were intro-

duced into countries where it is not now present. The pine wood nematode has the potential of being introduced into these countries through the transport of infested new and used coniferous packing materials such as pallets, crates, and skids.

The Commission of the European Communities, 15 member states, recognized this threat and passed emergency measures to protect the health of their forests. Specifically, these measures require that all non-manufactured wood packing material (NMWPM) be treated to kill the pine wood nematode by one of three treatment options: heat treatment (HT), fumigation, and chemical pressure impregnation (CPI). For wood packing material to receive a quality mark of HT, the lumber or wood packing material must be artificially heated to a minimum core temperature of 56°C (133°F) for 30 minutes.

While the European Union's regulatory restrictions were aimed at coniferous wood products, the International Standards for Phytosanitary Measures - "Guidelines for Regulating Wood Packaging Material in International Trade - 2002" as promulgated by the International Plant Protection Convention, broadened the standards to quarantine pests associated with wood packaging material to those made of coniferous and non-coniferous (e.g. oak) raw wood used in international trade or transport. In concert with international compliance requirements, the American Lumber Standard Committee, Incorporated has published "Wood Packing Material Enforcement Regulations - Nov. 7, 2003" outlining its policies and inspection procedures for treatment of wood packing materials.

Even though the DOD was granted some compliance concessions by the European Union for war materials which were previously in country or packaged with old wood packing material, the special exemptions to the phytosanitary standards will not be extended to future utilization of wood packing materials.

Fortunately, a proactive pest management demonstration project, by the U. S. Army Center for Health Promotion and Preventive Medicine (USACHPPM), Defense Logistic Agency (DLA), the U.S. Army Environmental Center (USAEC) and a small private company in Pennsylvania (Topp Construction Services - Pest Heat Thermal Pest Management) resulted in the development of portable heat chambers as an alternative to fumigants and other pesticides in controlling pests infesting military commodities, such as stored food products and wooden pallets. This collaborative project clearly demonstrated that heat chambers could effectively and economically heat treat wood packing materials.

Pest management through temperature manipulation is an important



Thermal pest management chamber at Defense Distribution Depot Susquehanna, Pennsylvania.



(continued from previous page)

component of the overall integrated pest management (IPM) strategy which is to mitigate pest damage by implementing a combination of pest control techniques (e.g., cultural, chemical, biological, mechanical, etc.) while striving to optimize economical gains and minimizing environmental degradation. Heat technology to control pests is in compliance with the policies and procedures established for the DOD Pest Management Program (DODI 4150.7).

Based on the success of the initial thermal chamber studies, Topp Construction Services developed a commercial recirculating chamber (PEST-HEAT®, Thermal Pest Management Systems). In this design, hot air used to heat treat wood products is constantly recirculated in a closed loop system between the chamber and a stainless steel heat exchanger heated by either natural gas or propane. Products of the fuel combustion are vented to the exterior environment and not introduced into the chamber.

A fuel saving feature of the heating system allows for the heater to turn off when the interior temperature reaches 195°F and back on when the temperature drops to 193°F. The combination of air temperature, flow rate, and distribution results in rapid uniform heat up of the chamber load with no material being exposed to temperatures above the preset limit. The result is that the equipment can heat treat 540 pallets within four hours with minimal energy cost (\$15 per load). The temperatures of the whole chamber system is monitored by state-of-the-art electronics and recorded on a real-time basis. This permits accurate assessment of the treatment quality and provides an audit trail necessary for regulatory compliance auditing.

Four DOD installations are now using heat chambers to treat wood packing materials: Defense Distribution Depot Susquehanna, PA, located at New Cumberland, PA; Defense Distribution Depot San Joaquin, CA, located in Tracy, CA; McAlester Army Ammunition Plant, OK, and the Naval Station Norfolk, VA. Based on chamber usage records from the two

Defense Distribution Center depots, approximately 1.86 million board feet of lumber (wood pallets) have been treated in this chamber during a two-year period of time (Oct 01 - Nov 03).

If this heat treatment chamber had not been available, DOD would have been forced to use fumigation with methyl bromide - one of the treatment options accepted by the international regulatory organizations.

Methyl bromide has been identified as an ozone-depleting agent and is being phased out wherever possible, except for quarantine pests. To fumigate all this material, DLA would have used in excess of 5,000 lbs of this ozone depleting fumigant. Moreover, cost estimates for the two types of wood treatments, heat versus fumigation, indicate that heating treating lumber was approximately 40 per cent less expensive than fumigation.

Heat treatment also offers the following advantages:

- Simple and convenient
 - can be performed by in-house staff
 - can make multiple runs in one 8 hr work period compared to methyl bromide fumigation which requires a minimum treatment time of 16 hours.
- Safe
- Economical
- Does not affect pallet service life

- Meets both the European Union Emergency Measures for NMWP and International Standards for Phytosanitary Measures

Heat is truly proving to be the eloquent solution. It is safer, cheaper, environmentally friendly, and more convenient than chemical fumigation; it meets all the regulatory requirements of the European Union, the American Lumber Standard Committee, Incorporated, and the recently enacted international standards for phytosanitary measures. In addition, modern heat technology conducted within a pest management program provides another tool which supports the DOD's commitment to Integrated Pest Management (IPM) goals. Due to their versatility, heat treatment chambers should be considered for other pests.

POC is A. Lynn Hoch, 410-436-1564; e-mail: Alfred.Hoch@aec.apgea.army.mil

Lynn Hoch, a Booz Allen Hamilton consultant, supports the Army Pest Management Program at the U.S. Army Environmental Center.

Brian C. Zeichner, U.S. Army Center for Health Promotion and Preventative Medicine, and Zia A. Mehr, Booz Allen Hamilton, USAEC, also contributed to this article. PWD



Rapid pallet loading system at the thermal pest management chamber



The Army Installation Design Standards (IDS) web portal: an informative and collaborative web tool available to all

by Larry H. Black, Gary W. Burns, Josh Park, and Mason S. Chang

The Portal: An Overview

The Army Installation Design Standards (IDS) web portal uses the latest web technologies in support of the Army IDS Program. The web portal provides a web-based knowledge management community for facilitating Army installation design and development. The intent of the IDS web portal is to increase integration between the various elements working with the design and development of Army installations to include HQDA, HQIMA, IMA Regions, Garrisons, and the Master Planners, Engineers, Architects and other professionals providing services to sustain and improve our military communities. The web site provides the IDS program with a common management interface leveraging web technology and incorporating the Army Installation Design Standards at all Army installations, garrisons, depots, centers, and training sites to include Army Reserve and Army National Guard.

The Army IDS web portal is a multifaceted web space offering the following features:

- Viewing of the IDS online,
- Downloading of the IDS in both MS Word ® and PDF formats,
- Interactive IDS Comment & Suggestion Workspace,
- Interactive Technology Comment & Suggestion Workspace,
- The IDS E-Newsletter, and
- DS Waiver processing, tracking, and archiving.

In his article "The Army Installation Design Standards" in the July/August 2003 Public Works Digest, Mr. Robert Sperberg, Chief Facilities Policy Division, ACSIM, stated "The goal of the Installation Design Standards is to make our Army communities function at their best, reflecting the quality of our Army and its Soldiers." The IDS web portal was designed and continues to evolve to meet the

requirements incumbent in accomplishing this goal.

The IDS web portal is located on the web at http://www.mantech-mec.com/army_ids/.

Online IDS Viewing and Downloading

The Installation Design Standards (IDS) were developed to ensure standardization across all of our posts and garrisons; instill a sense of community, order, tradition, and pride in our installations by those who live and work there; establish standards for cost-effective resource investment; and ensure that sustainability, reliability, and efficiency are built into all of our facilities.

The IDS provides hyperlinks to each adopted standard for easy reference by planning, design, engineering, and installation management personnel. Additionally, for the users' convenience, many useful hyperlinks are provided to a wide variety of web documents and sites.

The IDS can be accessed in several ways from the IDS Homepage.

- One way is to search the index. Once a topic is located, access can be gained by using the Table of Contents hyperlink located on the IDS homepage next to the index link, which allows the individual to select the chapter or subchapter where the desired material is located for viewing online or downloading. In the near future the IDS index will be hyperlinked permitting rapid access throughout the document.
- Additionally, the document can be accessed and opened or downloaded in its entirety as an MS Word ® or PDF document.

Both the MS Word ® and PDF versions of the IDS are searchable by using the "Find" function of MS Word ® and Adobe Acrobat ®.

The IDS is a living document and is updated as required with changes being noted in the Summary of Changes section. This section is easily accessible by clicking on the "Summary of Changes" hyperlink located on the left menu bar.

IDS E-News

The web-based Army Installation Design Standards Policy Newsletter (IDS E-News) presents current command direction, implementation strategy from the Army's top leadership, provides the updated standards for use by Army installation managers, and presents information and items of interest.

The IDS E-news homepage at <https://secureapp2.hqda.pentagon.mil/acsimnews/> presents the most recent issue of the newsletter. The left menu bar offers viewers the following functions:

- Subscriber Information (to register your subscription).
- Article Submission (open to both the Army and civilian communities).
- Newsletter Archive.

Army IDS Comment & Suggestion Workspace

The "Army IDS Comment & Suggestion Workspace" provides an interactive web-based workspace designed to facilitate a continuous improvement process for the Installation Design Standards. The workspace provides web pages for the submission, responding, cataloguing and archiving of comments and suggestions concerning the IDS.

Features of the workspace include:

- The ability to solicit comments on any of the IDS topical areas i.e., Building Standards, Landscape Standards, Force Protection Standards, etc. ➤



(continued from previous page)

- The ability to review any comment or suggestion submitted and the status of action taken in response to the comment, i.e., pending review, implemented, no action required, etc.
- Search capabilities.

The workspace is scheduled for completion 30 June 2004.

Technology Comment & Suggestion Workspace

The "Technology Comment & Suggestion Workspace" will serve as a repository of the Assistant Chief of Staff for Installation Management (ACSIM) Technology Standards Group (TSG) data. The site will contain information on the technology ideas submitted, the status of the ideas, and the final outcome of the TSG evaluations. The web site will also serve as the real-time submission point for ideas. On the site, individuals will be able to enter their ideas and suggestions and monitor their progress. Search and analysis tools will also be available to assist users in finding the latest ideas and recommendations.

The web site also serves as a tool for orchestrating the collaborative efforts of the IDS technology working group. Availability of the "Technology Comment & Suggestion Workspace" will be announced in the IDS E-news.

IDS Waiver Tracking and Archiving

The IDS Waiver web pages provide a web-based tracking mechanism where waivers to the IDS are tracked as they are processed through the appropriate channels. The IDS Waiver web pages contain the following areas:

- Waiver Process / Instruction
- Tracking, Submission & Search
- Waiver Archive

The waiver tracking section includes search capabilities. Some of the searchable criteria include:

- Submitting IMA Region
- Referenced IDS paragraph number
- Fiscal Year (FY) of submission

Additionally, all memoranda submitted subsequent to waiver submission are archived.

The IDS waiver web pages are scheduled for completion by 30 June 2004. For a more detailed discussion on the functionality of these pages, please see the MS PowerPoint® presentation on the web at http://www.mantech-mec.com/army_ids/waiver/Presentation.cfm.

The Evolving Portal

The IDS web portal provides several web-based avenues where the military and civilian communities at large can share their insights and knowledge on the subject

of Army installation design. The goal is to keep the community at large informed on the development of Army standards and to share experiences and thoughts concerning Army installation design and development.

The functions and features discussed above will be online and ready for use to facilitate the collaborative multi-disciplined team process required to help organizations align their use of design standards to better serve our Army and its members.

MG Anders B. Aadland, Director IMA, stated that, "Installations are the work centers for the military and civilian team, hometown for our families and, unequivocally, represent a symbol of enduring freedom for the world." The IDS web portal is an online tool designed to assist the Army in its commitment to providing the very highest standards of quality to the Army community.

POC is Larry H. Black, AIA, Program Manager/Architect, OACSIM, Facilities Policy Division, (703) 602-4591, e-mail: larry.black@hqda.army.mil

Gary W. Burns, PMP, is the ManTech International Corporation, Army Installation Design Standards Program Manager, Josh Park is a Software Engineer with ManTech International Corporation, IDS Portal Web Master; and Mason S. Chang is a Staff Analyst with ManTech International Corporation supporting the Installation Design Standards program **PWD**

HOST offers lead hazard management information and instructional programs for garrison managers

by Graham Parker

The Hands-On Skills Training (HOST) website was developed jointly by the Assistant Chief of Staff for Installation Management, the U.S. Army Center for Health Promotion and Preventative Medicine, and the U.S. Army Corps of Engineers. This website is in user-friendly format and includes 16 separate modules that cover a range of topics from a general overview to specific technical requirements.

HOST provides instructional tools for program managers, commanders, and other support personnel to identify, control, and abate lead-based paint hazards; train, monitor, and protect workers; and comply with mandatory disclosure requirements. HOST provides these tools in a user-friendly format that includes 16 separate modules with voice and video features.

The HOST website may be viewed at <http://www.hqda.army.mil/acsim/fd/policy/host/>. Additional information can be found at the Army Lead and Asbestos website at <http://www.hqda.army.mil/acsimweb/fd/LeadAsbestos/pages/home.htm>.



HQRADDS is changing!

by David Purcell

As reported in the September/October 2003, Vol. XV, No. 5 issue of the Public-Works Digest, HQRADDS is changing! HQRADDS is an acronym used for the Headquarters Redesigned Army DUERS Data System and DUERS is the abbreviation for Defense Utility Energy Reporting Systems. Addressing this tongue tying acronym is just one of more than 50 improvements that will be incorporated in to the new Army Energy and Water Reporting System (AEWRS) over the next 18 months.

More than just a name change, when all improvements have been implemented, users will encounter a more user-friendly system that has been regionalized and operates with drop-down menus for data entry/correction. In addition, the reports will be generated in a format that is readily compatible with Excel to facilitate modification to management needs. As important and visible as the functional improvements will be to the user, the architectural (behind-the-scenes) improvements will also enhance the operation and compatibility of the system. Due to the extensive number of improvements (too numerous to list in this article), they will be implemented in a phased approach with incremental delivery to the end user.

Phase 1 has already begun and will be completed in 3-4 months. Some of the more obvious improvements in Phase 1 include:

- Realignment of DODAACs by Region and add Region capability to view data and pull reports.
- Optimize report printing.
- Enhanced data entry and correction with drop down menus.
- Replacing Oracle Forms technology with Java 2 Enterprise Edition (J2EE) standards. With the implementation of J2EE, users will no longer need to download the Oracle JInitiator plug-in.

Once Phase 1 has been fielded, Phase 2, which should take approximately 5-6 months, will begin and will include such improvements as:

- Installation access to past data will be modified. Users will be given the ability to access previous FY data for 6 months into the new FY, after which access to previous FY data will be blocked with read only after that time.
- Standard DOD Unit of measures will be calculated by the system. The user will input data/units as received in their bills.
- Added capability for user to change password when notified of password expiration.
- Help feature and administrative email function will be included.
- Enhanced "Look & Feel" of screens
- Improved access to the AEWRS website.

Phase 3, which should take another 5-6 months, will begin and will include such improvements as:

- Water consumption and cost will be tracked and reports to extract water data will be added.
- Energy Manager's database will be created which will include a data entry interface and all functionality necessary to support the Annual Energy Report.
- Reports will be downloaded in Excel or a compatible format.
- Accommodation for the reporting of Mobility Substitution Energy.

Phase 4 consists of the final improvements and the duration is dependent upon the time required to establish the interfaces with other systems. The proposed interfaces will reduce redundancy of data entry and provide consistent data among systems. Currently, it is proposed that AEWRS interface with the following systems:

- Installation Status Reporting (ISR)
 - Integrated Facilities System (IFS)
 - Fuel Automated System (FAS)
 - National Oceanic and Atmospheric Administration (NOAA)
- In addition, Phase 4 will incorporate changes such as:
- Add capability for local report design.

- Add degree day's information.
- Improve chart/graph capability.
- Add capability for administrator to send mass email to all registered users.

Have no fear, as the phased improvements are implemented, concise instructions will be issued to assist users with the enhancements to include on-line tutorials. If you can use the system now, you should have no problems using the enhanced version. Due to the extensive nature of all the improvements, regional training will be offered and encouraged again in FY 05 as a refresher for the experienced users as well as initial training for new users.

POCs are David N. Purcell, (703) 601-0371, e-mail: David.Purcell@hqda.army.mil; and Benu Arya, (703) 604-2474, e-mail: Benu.Arya@hqda.army.mil

David Purcell is a general engineer in the Facilities Policy Division, OACSIM. **PWD**

CALL FOR ARTICLES

The September/October 2004 issue of the **Public Works Digest** will feature

Energy Management and Water Conservation on Army installations.

Please submit all articles to:

alex.k.stakhiv@usace.army.mil with POC (name, title, office) and author (name, phone, e-mail) information no later than August 27, 2004



OACSIM's Enterprise Architecture to evaluate information technology investments

by Alladore Csontos

The Office of the Assistant Chief of Staff for Installation Management (OACSIM) Plans and Operations Division has been directed by MG Larry J. Lust to develop and implement the OACSIM Enterprise Architecture (EA). The EA will provide a blueprint to guide and constrain investments in OACSIM organization, operations and systems as they relate to or impact on operation from an enterprise-wide OACSIM perspective. It will identify needs, opportunities, and benefits of organization functional alignments, cooperation, coordination, and collaboration, as well as the requisite systems capability and interoperability to support these improvements.

The EA will be the basis for the planning, developing, and implementing business management systems that comply with federal mandates and requirements and produce accurate, reliable, timely, and compliant information for OACSIM staff. The structure and content will be based on DoD Architecture Framework (DoDAF).

The EA will blueprint three temporal views:

- 1) the current way of doing business (operations, systems, and standards - the "as is" environment).
- 2) the desired future "best practices" way of doing business (operations systems and standards - the "to be" environment).
- 3) a series of intermediate states by which controlled migration from "as is" to "to be" will be accomplished (Transition Plans).

The EA will provide the OACSIM with the means to produce significant improvements in a consistent and organized manner and a framework to evaluate future mission critical or mission essential information technology investments. Benefits will be accrued as the enterprise architecture is built out through increments that focus on real capabilities with visible benefits. Thus, the EA will result in fewer, more capable integrated systems, reduced operations costs, and better informed decisions.



Alladore Csontos

The EA will also define links to external Army and Joint, Interagency, and Multi-national (JIM) nodes, but it will not define external operations and information systems. Many external links will be represented as connections to the Global Information Grid (GIG). This version of the EA will include the touch-points for the operations and information systems of the Field Operating Agencies (FOAs) and the OACSIM HQ, which will allow for realistic scoping of this stage of the OACSIM EA and spiral development of usable EA products within the resources allocated.

Providing a mechanism for better understanding of system and organizational inter-relationships within the OACSIM Headquarters domain of responsibility, the EA will capture and codify the interdependencies and inter-relationships among OACSIM Headquarters' business operations, the underlying IT infrastructure, and the software applications supporting those operations. The information developed through the EA-based optimization analysis and risk analysis will help management reduce operating costs by understanding "where they are" and "where they are going," both operationally and in system integration.

The various views that comprise the EA will support integration of current systems as well as the development and integration of new, interoperable systems. A key benefit will be the avoidance of the procurement of nonintegrated (i.e., "stovepiped") and/or duplicative systems.

Parallel development processes will produce and maintain EAs to reflect the actual current state, the "as-is" and the desired objective state, the "to-be."

To ensure compatibility and integration, the EA will comply with the DoDAF, the Army Enterprise EA Guidance Document (AEAGD), and the Joint Technical EA - Army (JTA-A), while maintaining compatibility with the Army EA and the GIG EA. DoDAF compliance will dictate rules and product specifications for developing and presenting EA descriptions. The DoDAF - guided development process will include coordination with cognizant organizations such as the Army Information Systems Engineering Command (ISEC), TRADOC, and the Army Architecture Integration Cell (AAIC). This approach will ensure a uniform basis for comparison and integration with other EAs that will ensure the viability of installations as flagships by maximizing installation operations and supporting technology for efficiency and effectiveness.

The DoDAF prescribes four classes of views that together comprise the EA: the all view (AV), operational view (OV), system view (SV), and technical view (TV). The AV will describe the scope, purpose, context and timeframes addressed. The OV will describe the tasks and activities of concern, the organizational modules and entities that perform the activities, and the information exchanges required between activities and between performing organizations. The SV will describe the systems of concern and the connections among those systems based on requirements defined by the operational view. The technical view (TV) will describe a profile or a set of profiles, each comprising a minimal set of time-phased standards and rules governing the implementation, arrangement, interaction, and interdependence of system elements. The TV includes the protocol standards that, when incorporated, ensure that the enterprise avoids the creation of additional system "stovepipes."

In addition, this OACSIM HQ EA will provide artifacts for portfolio analysis as referenced by DoDAF.

POCs are Alladore Csontos, (703) 692-9214, e-mail: alladore.csontos@hqda.army.mil; and Terry McCarty, (703) 681-5256, e-mail: Terry.McCarty@cfsc.army.mil PWD



New utility policies for RCI

by William F. Eng

The Army recently issued policies spelling out how payments will be made for utility services at Residential Communities Initiative (RCI) properties. The first policy document issued by the Assistant Secretary of the Army for Installations and Environment (ASA (I&E)) gives guidance, which should be of particular interest of the residents of RCI housing. The second policy addresses how installations would provide utility services and receive reimbursement from the RCI partnership.

Just like their civilian counterparts, military residents in RCI housing will be responsible for their own utilities. Residents will be rewarded for their conservation efforts and held responsible for wasteful usage within their housing units. When the RCI project constructs a new house or renovates an existing one, meters will be installed to measure the electricity, gas, and/or heating oil used by each housing unit. In accepting a RCI housing unit, a military resident turns his Basic

Allowance for Housing (BAH) over to the RCI partnership to pay for the rent and a utility allowance. The utility allowance is a reasonable estimate of the average cost of electricity, gas and/or heating oil.

The utility meters will be read by the RCI partnership monthly and a statement made available for review. When a resident's excess usage charges are greater than \$50.00, a bill will be mailed for payment. Likewise, when energy conservation savings total more than \$50.00, a rebate will be issued. Utility billing will become effective once there are sufficient numbers of homes built or renovated and metered, and a 12-month baseline of average utility costs established. Utility allowances will be re-computed annually with separate allowances for each specific type of building.

The RCI authorizing legislation also allows the Army to provide utility services to the RCI partnership and for the Army to be reimbursed for the cost of any utilities or services furnished. The second ASA

(I&E) policy guidance states that for reimbursement to occur, there has to be a written agreement spelling out the terms and conditions for providing the utility services and for determining the utility rate to be used when seeking reimbursement.

Contracts between RCI and the installation made before this policy was issued (5 May 2004) will have to be modified to comply with the policy before the next utilities sales rate computation cycle. Installation personnel responsible for the utility sales to the RCI partnership should become familiar with Federal Management Regulation (FMR) 7000.14R, Volume 11A (Reimbursable Operations Policy and Procedures) and DoD Instruction 4000.19, Interservice and Intragovernmental Support.

POC is William F. Eng, (703) 602-5827, e-mail: William.eng@hqda.army.mil

William Eng works at HQDA, ACSIM on utility issues, specifically solid waste, recycling, water and wastewater. PWD

Installations looking at energy security

by Jim Paton

Everyone recognizes our dependence on energy as it powers the facilities in which we live and work. But how reliable is our energy service? Preventive maintenance to utility systems and proper operation should ensure reliability, but what about disruptions due to severe weather, accidents, vandalism, terrorism, etc.-how do we protect against those potential threats? By developing and implementing energy security plans.

Every installation must have an energy security plan that lays out the installation's plan for ensuring safe and reliable utility service, especially for mission critical facilities whose energy services are vulnerable to disruption. Recent guidance issued by Office of the Assistant Chief of Staff for Installation Management and Headquar-



Jim Paton

ters, Installation Management Agency directs installations to develop energy security plans to address potential threats to utility disruptions.

Requirements for energy security plans have been in effect for many years; however, actual development or updating of these plans has been neglected. Energy security plans are being emphasized now as new considerations of national security have caused a renewed interest in energy security.

The energy security planning process includes conducting energy vulnerability analyses, establishing energy emergency preparedness and operation plans, and developing and executing remedial actions plans to remove unacceptable energy security risks. In developing plans, each installation needs to look at its own, and in some cases unique, mission requirements, utility infrastructure conditions, geographic considerations, and capabilities of their commercial utility suppliers to assess their



Have we learned enough to get it right?

by Derya Smith

Talk about utility privatization. Well, we have been privatizing since the early 90s.... and our experiences suggest that private ownership of the utility systems has resulted in increased capital investment, improved operating efficiencies and better services. It's making us realize that if we're to be an innovative Service in the DoD, we've got to get out there and compete for every Army dollar we get.

We have a total of 351 utility systems in the United States. Currently, 89 systems in the U.S. have been privatized, 38 are pending for award/exemption, 28 are exempt, 90 are under negotiation, and 106 are under contract development. Utility systems at overseas locations are generally owned by the host nation and are evaluated using host nation laws and international agreements.

Installation experiences so far indicate a high degree of satisfaction with the quality and reliability of utility support and services received from our new commercial providers. So far, there have been no known criticisms or complaints concerning poor commercial provider support. COL Riera, Fort Benning Garrison Commander,

stated that they are very pleased with Flint Energies, the new owner of the electric distribution system at Fort Benning. Flint Energies (FLINT) signed the contract with the Army in February 1999 and took over the system in June.

The privatization contract with FLINT included the assumption of ownership of electrical distribution system and provision of complete distribution services, including but not limited to, operation, maintenance and replacement as required of the distribution system components for a ten-year period.

The contract stipulated a fixed annual consumption of 220 Million Kwh. A fixed pro-rata per Kwh charges are to be paid to FLINT per month for the maintenance and operation of the privatized system.

As a part of surveillance, Fort Benning monitors distributed power outages, and FLINT responds to identified problems

The privatization of electrical distribution system benefited Fort Benning in the following areas:

- Improved reliability of the system as FLINT carries out preventive maintenance.

- Efficient Environmental compliance in the replacement of lead cables and PCB in transformer oils.
- Improvement in system safety to National Electrical Code, where applicable.
- Diligent support in the new construction and replacement of defective component of the system
- Dedicated FLINT crew for the installation with quick turnaround of routine maintenance issues.
- Improved communication with installation assigned personnel and FLINT Operations Center through specific radio frequency network. A dedicated Transmitter is being installed for improved communications.

FLINT took the initiative to install a fuel cell this year as a demonstration unit at Fort Benning.

To sum it up: Not bad, not bad, at all.

POC is Derya Smith, (703)601-0370, e-mail: derya.smith@hqda.army.mil

Derya Smith works on utility privatization issues at HQDA, ACSIM. PWD

(continued from previous page)

susceptibility to energy interruptions. They also need to look at how to maintain reliable energy service to critical facilities, such as command level operations, life-saving medical, airfield flight operations, emergency response, communication, and to some extent energy and water distribution systems and facilities.

Installations that do not already have energy security plans may have pertinent information for developing such plans in their installation master plan, operational plans, energy management plans or disaster preparedness plans.

Most critical operations already have backup power capability; however, as

installations develop their energy security plans, they may find mission critical facilities without reliable service and may be considering back-up or standby capability.

Installations that have privatized utility service should consult with their utility suppliers for potential capability they may be able to provide. Installations considering developing additional infrastructure for supplemental energy and power facilities should do so in consideration of their capabilities for maintaining and operating such equipment. In any event, development of energy security plans should be consistent with the installation's plans for privatizing utilities.

Development of energy security plans is not a one-time exercise; plans should be reviewed for accuracy and updated at least annually.

For additional information, please contact your Region or HQ IMA.

POC is Jim Paton, (703) 601-0366, e-mail: james.paton@hqda.army.mil.

Jim Paton is a general engineer in the Facilities Policy Division, OACSIM. PWD



249th Engineer Battalion Soldiers and IMA provide emergency backup power to Hawaii wastewater treatment plant

by SFC Christopher P. Woolley, and Major Paul B. Olsen

During February of 2004, the island of Oahu suffered some severe weather. Torrential rains and near-hurricane force winds knocked down trees and power lines all over the island. Some areas of the island were out of electricity for several days, including Schofield Barracks and Wheeler Army Airfield.

Electricity is critical for hospitals, first responders, and critical infrastructure. Federal regulations require these facilities have both redundant commercial power feeders and backup power source. During the 48-hour outage at Wheeler Army Airfield, personnel at the wastewater processing facility reported that they were unable to maintain power for any significant amount of time. According to Wayne White, the Superintendent of the facility, there is adequate storage for about 45 minutes worth of wastewater flow before the system fails, resulting in a significant health and environmental hazard.



249th Engineer Battalion Soldiers and IMA employees partner to speed backup power equipment to the Wastewater Treatment Plant at Wheeler Air Field Hawaii.

Fortunately, commercial power was restored within 18 hours, but in order to remain in compliance, the Directorate of Public Works for Schofield Barracks and Wheeler Army Airfield called on the 249th

Engineer Battalion (Prime Power) for a critically needed interim solution.

The battalion dispatched its first detachment from Alpha Company to execute the backup power mission. After sending in an assessment team to determine the power requirements and most feasible connection points, the detachment deployed and installed two 750kW generator sets and a transformer to the wastewater treatment plant. The DPW and the local logistics contractor rallied to provide transportation, electrical cable and necessary electrical terminals for the installation. The generators were on line in less than six hours from the time the Soldiers of the detachment received their mission.

In April, the detachment replaced the older MEP-012A with the newly fielded Deployable Power Generation and Distribution Systems (DPGDS). Each power unit has two Caterpillar 460 kW generator sets for a total output of 920kW. With 1.8MW of generating capacity, the wastewater treatment facility has more than enough back-up power available.

For more information on the 249th Engineer Battalion (Prime Power), please e-mail: paul.b.olsen@usace.army.mil

POC is SFC Christopher Woolley, Prime Power Supervisor, (808) 655-1076, e-mail: woolleycp@schofield.army.mil

SFC Christopher Woolley is a Prime Power Section NCOIC for 1st Detachment Alpha Company 249th Engineer Battalion; and Major Paul Olsen is the Battalion Operations Officer. PWD



CW3 Patti Shoefstall, and the author pose in front of two of the Army's new Deployable Power Generation and Distribution Systems (DPGDS) currently providing backup power to the wastewater treatment plant.



Get ready for the 2004 Combined Services Recycling Workshop in Phoenix, Arizona

by William F. Eng

The 14th Combined Services Solid Waste and Recycling Workshop will again be co-located with SWANA WASTECON, which for 2004 will be held at the Convention Center in Phoenix, Arizona, from September 20 through 23, 2004. The Solid Waste Association of North America advertises this event as "...the only solid waste exhibition run by and for solid waste professionals!" The Office of the Secretary of Defense considers the annual DoD Recycling Workshop to be "...the premiere recycling event...for DoD personnel."

The DoD Workshop has something for every echelon in installation management - garrison, DPW, region, and headquarters, as well as field operating offices and support agencies. And for everyone and anyone whose job has anything to do with specifying or purchasing products, packaging and shipping goods, to just putting out the garbage on "trash night." How many of us can really say we have nothing to do with solid waste? You don't have to be the manager at the recycling center or the environmental compliance officer to know that the Army as an organization, and each of us individually, produces a lot of solid waste, in the form of trash, refuse, garbage, soda cans and bottles, newspapers, office papers, cardboard, wood pallets, scrap metal, etc.



William F. Eng

So, whether you are the PX manager, Commissary Officer, or the affirmative procurement official for your installation, or you want to know more about QRPs, you should go to the WASTECON website (<http://www.swana.org/sections/wastecon/>). There you will see all the educational and networking opportunities that will be part of the Combined Services Recycling Workshop and SWANA WASTECON experience. Be sure to select the FEDERAL EMPLOYEE registration rate and use the DOD SWANA membership #31362DOD to secure the discounted rate of \$295.00, if registered by 20 August. Sorry, this rate is restricted to federal military and civilian personnel only.

Per Diem rate (\$90) hotel rooms are available until 31 August at the HILTON GARDEN INN, 4000 North Central, Phoenix, AZ. Make your reservations directly with the hotel at 602-279-9811 and be sure to request the Solid Waste Association of North America block. Important! Deadline for reservations at the government per diem rate is 31 August 2004.

Your paid registration fee includes the DoD Workshop and full access to the WASTECON general and technical sessions and exhibits. Certain activities (field trips and SWANA certification classes) and social events are at extra cost. Tuition-free DoD training classes are being planned for Monday, before the official workshop-opening day. An all-day SWARWeb training class, complete with PC's and Internet access for real time training is already assured. Another half-day class is in the final planning stages and may be about integrated solid waste management, construction & demolition waste management, deconstruction, or new the DoD metrics.

Come to Phoenix and the Combined Services Recycling Workshop and check it out!

POC is William F. Eng, (703) 602-5827, e-mail: william.eng@hqda.army.mil

Meet me in St. Louis

The Installation Management Agency (IMA) is proud to announce that planning has begun for this year's DPW Worldwide Training Workshop. While the workshop has not been formally approved yet, it is tentatively scheduled for 7-9 December 2004 in St. Louis, Missouri, at the Hyatt Regency Hotel. The IMA will be conducting this workshop in partnership with the U.S. Army Corps of Engineers (USACE). The goal is to educate DPW professionals and installation managers on the best business practices and innovative strategies to use in their management of public works.

Participants will also get a chance to share their installation successes, challenges and problem areas along with proposed solutions.

Based on the Army's focus on installations as flagships, the workshop committee, which is comprised of personnel from IMA, USACE, and the Office of the Assistant Chief for Installation Management (OACSIM), has selected the theme "Flagships of an Expeditionary Army." The planning of the agenda is also underway with several proposed tracks including Modularity; Planning and Programming;

Operations and Maintenance; Privatization, RCI and Housing; Mobilization; and Environmental issues that dovetail with many current, educational topics. Look for more details in the next Public Works Digest.

Please put these dates on your calendar and plan on joining us in St. Louis for a most rewarding and informative workshop.

POC is Bob McKeever, (703) 602-4227, e-mail: robert.mckeever@hqda.army.mil



Energy awareness seminars provide opportunity to conserve energy, save money

by David Williams

Energy. Will it always be there when we need it? That is a question that many of us in the general population rarely, if ever, ask ourselves. When we turn on a light switch, we take it for granted that the light is going to come on. When we turn on a water faucet, we take it for granted that water is going to come out. When we turn on our gas heat, we take it for granted that the heat is going to come on. It's great to know that we can count on this happening without fail. But will we always be able to?

The Army uses several vehicles to ensure that energy will be there when we need it. Energy Savings Performance Contracts (ESPC), Utility Energy Services Contracts (UESC), Energy Conservation Investment Program (ECIP), and the Military Construction Army (MCA) program

them, in which to determine low cost/no cost energy and water savings opportunities.

The Energy Awareness Seminar Program is an OACSIM sponsored and funded program that focuses on a one-week survey of installation facilities, processes, and operations and identifies energy savings opportunities. Seminar presentations are assembled throughout the week and three seminars are presented at the end of the week, highlighting the teams' findings.

The first seminar is given to the building energy monitors and focuses on things that they can do to reduce consumption and conserve energy usage in their buildings. The second seminar is given to the DPW engineering staff and is more detailed and technical in nature and provides the engineering staff with recommendations for improving operational

efficiency on such equipment as boilers, chillers, energy management control systems (EMCS), etc. The third seminar is given to the Installation/Garrison Commander and the executive staff. It provides the decision makers with a macro view of the survey findings and recommendations on how to incorporate improvements into their daily operations.

Currently, for FY2004, the Army has performed eight Energy Awareness Seminars. In those seminars, the survey team found potential savings of \$1.6 million per year, averaging 3.0% of the annual energy costs at these installations.

In our most recent EAS at Fort Bliss, an installation that is, by the way, very energy conscious and doing an extremely good job of conserving energy, the energy survey team found potential savings in excess of \$212,000 annually. These poten-



Army Energy Awareness Program Manager, David Williams inspects a fire-tube boiler at the Fort Bliss Headquarters building.

tial savings can be realized at low cost if the survey team's recommended improvements are implemented. Following is a list of the most common energy savings ideas recommended:

- Perform boiler tune-ups using a flue gas analyzer.
- Reduce building over-heating and over-cooling.
- Optimize building temperature setback/setup on nights and weekends.
- Use low flow water faucet aerators.
- Install occupancy sensors to control lighting in restrooms and break rooms.
- Turn off unneeded lights (both at night and during the day).

A large percentage of the potential savings found by the energy survey team, and the associated recommended corrective actions are things that make sense to do. Saving energy has to become a mindset. It must become a part of our daily routine. We must start thinking of energy as the precious commodity that it is and work to conserve it and ensure that it will be there and economically accessible for generations to come.

POC is David Williams, (703) 601-0372 DSN 329, e-mail: David.Williams2@hqda.army.mil

David Williams is the Army Energy Awareness Program Manager, Facilities Policy Division, OACSIM. PWD

Economic Analysis Workshops

If you are interested in attending a workshop to learn how to successfully prepare an economic analysis (EA) for DD1391s, please send your name, phone number, and e-mail address to donna.r.smigel@hq02.usace.army.mil . The workshop is for preparers and reviewers of the EA, and knowledge of ECONPACK is a must. No date has been set; this inquiry is for planning purposes for next year.

POC is Donna Smigel, (202) 761-5602, e-mail: donna.r.smigel@hq02.usace.army.mil

are just a few of the Army programs used to obtain energy efficient equipment and services.

These programs provide alternative financing and appropriated funding that is vital to the Army's efforts in meeting the energy reduction goals set forth by Executive Order (E.O.) 13123. In most cases, there are significant costs associated with these programs. However, the Energy Awareness Seminar Program (EAS) provides installations an avenue, at no cost to



William (Bill) Sugg

Public Works Division

Installation Management Agency

In 1980, William (Bill) Sugg began his career as a TRADOC intern with the Directorate of Facilities and Engineering at Fort Gordon, Georgia. Later assignments included development and deployment of the Integrated Facilities System (Mini/Micro), Engineer automation support with the Installation Support Activity, Europe, and Engineer Resource Manager at Munich, Germany, and Fort Myer, Virginia, where he was dual-hatted as chief, Operations & Maintenance.

By 1993, Sugg was working at the U.S. Army Center for Public Works (CPW) in Alexandria, Virginia, on the development of public works automated systems, including the Installation Executive Information System (IEIS). Sugg left CPW in 1996 when he was offered a job in Chievres, Belgium, with the 80th Area Support Group (ASG) as chief of the Engineering, Resource Management Division (ERMD). The 80th ASG had both ASG and BSB (Base Support Battalion) duties with a focus on delivering services at the garrison levels, which was just the kind of work Sugg enjoyed.

"I spent four years there as chief of ERMD until the chief of Engineering, Plans and Services (EPS) Division left, and I moved over to that division to help get it organized and improve productivity," said Sugg. "I was chief of EPS for about a year and just after I got an extension to stay in Belgium for a sixth year, I was offered a job at the Marine Corps Logistics Base in Albany, Georgia."

Sold on the base's proximity to his son's school in Tallahassee, Florida, Sugg went to work on technology transfer at the Marine Corps' depot for overhauling ground combat vehicles. Working with other Marine Corps, Navy, industry and academic research organizations, he searched for more modern technologies for welding, non-destructive testing, parts replication, stripping, and coating vehicles.

"We had a big focus on corrosion prevention and I spent a lot of time on that,"



William (Bill) Sugg

Sugg continued, "and I was the Marine Corps' representative on the Joint Services Group for Pollution Prevention.."

With the establishment of the Installation Management Agency (IMA), many interesting positions opened up and Sugg was selected for one at the headquarters. He moved to Crystal City, Virginia, in 2001 to work for Don LaRocque in the Public Works Division.

"Collectively, we can do things that an individual installation would not be able to do."

Bill Sugg

"My primary focus areas are business operations and Engineer automation, but I've become sort of a utility infielder," Sugg explained. "Anything that doesn't fit comfortably into energy/utilities, housing, master planning, real property or military constructions arenas normally comes to me" explained Sugg. "The greatest part of my day is taken up by the SRM (Sustainment, Restoration and Modernization) Program, Medical Holdover issues and Modularity.

"Our business operations are essentially equivalent to the Engineer Resource Management functions," Sugg continued.

"I'm involved in the functional perspective on resource allocation, resource execution, the POM process, automated systems, work reception, planning and estimating, engineer training, engineer studies and support agreements. I have counterpart responsibilities here at HQ IMA for just about everything that falls under the traditional ERMD.

Unfortunately, he does not visit installations as much as he would like. Working primarily by phone and computer, he sends out e-mail guidance and requests for information, which are used to support installation planning and execution, and satisfy taskers from other HQDA-level organizations.

IMA's focus is on installations, stressed Sugg. "We're trying to deliver a consistent and equitable level of services to our customers. We're trying to get better at working corporately with our Regions and installations to accomplish the mission. To do that, we must break away from the current system where we basically give the Regions taskers and they have to pass the information back. In the future, we would like to work more cooperatively as one team instead of multiple teams passing information back and forth."

Sugg feels strongly that just as HQ IMA needs to move away from being the tasking organization, the Regions need to become more active in identifying regional efficiencies and looking for business practices improvements.

"The IMA Regions have strong teams of talented and experienced people," Sugg said. "When we bring our collective efforts to bear on a problem, we do a great job. Where we can improve is in being more proactive and asking ourselves what do we need to do so that everyone will benefit?" Sugg concluded. "What efficiencies can we employ? What standard processes can we look at so people can work smarter and better? Collectively, we can do things that an individual installation would not be able to do."



Installation Management Agency
2511 Jefferson Davis Highway
Arlington, Virginia 22202-3926

<http://www.lma.army.mil>

